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ABSTRACT

This manual contains the statistics generated from the Pennsylvania Quality Education Assessment (QEA) administered in 1986. The assessment was to evaluate the achievement of certain educational objectives in grades 4, 6, 7, 9, and 11 in the public schools. The tests were in the following areas: reading comprehension, writing skills, mathematics, analytical thinking; citizenship/social studies, arts and humanities, science and technology, environment, self-concept in school, and health and safety practices. Part I presents tables for each grade level containing the following data: (1) Pennsylvania School Norms; (2) percentile distribution of variables; (3) correlation coefficients among school scores; (4) correlation coefficients between school variable scores and school scores; (5) correlation coefficients among school condition variable scores; and (6) a description of the normative sample of schools. Part II contains developmental data on the comparability of test forms and reliability information. The 1986 regression analysis is appended. (JAZ)

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EQA Educational Quality Assessment

The Eastern Hemlock is the official State Tree of the Commonwealth of Pennsylvania

1986 Data

Division of Educational Testing and Evaluation
Bureau of Educational Planning and Testing
Pennsylvania Department of Education
1986

Commonwealth of Pennsylvania
Dick Thornburgh, Governor

Department of Education
Margaret A. Smith, Secretary

Office of Basic Education
D. Kay Wright, Commissioner

Bureau of Educational Planning and Testing
Donald L. Clark, Director

Division of Educational Testing and Evaluation
J. Robert Coldiron, Chief

June 1986

Pennsylvania Department of Education
333 Market Street
Harrisburg, PA 17126-0333

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INTRODUCTION

"Data: Factual material used
as a basis...for discussion or decision;
something used as a basis for calculating or measuring."

This manual contains the statistics generated from this year's EQA administration. Information for all five grade levels (4, 6, 7, 9 and 11) is incorporated into a single manual for the convenience of district officials and others who are interested in the "total picture" of assessment results.

A companion manual, the EQA Commentary contains the information not only to interpret EQA results but also to learn about the background and development of the program, the statistical bases of the reports and recommendations for using and releasing the data. It also includes details about all five grade level packages and is, therefore, the only interpretation manual needed for the five levels represented.

TABLE A-4

1986 PENNSYLVANIA SCHOOL NORMS
GRADE 4 SCHOOLS
N = 384

PERCENTILE	Reading Comprehension	Writing Skills	Mathematics	Analytical Thinking	Social Studies	Arts & Humanities	Science & Technology	Environment	Health Knowledge	Self-Concept	Health Practices	PERCENTILE
95	36.10	34.80	39.89	22.10	13.50	20.84	17.55	14.79	22.35	67.89	84.30	95
90	35.08	33.71	38.63	21.50	13.16	20.19	16.91	14.02	21.78	66.95	83.35	90
85	34.64	33.00	37.43	21.16	12.73	19.74	16.59	13.68	21.43	66.31	82.50	85
80	34.05	32.45	36.69	20.80	12.41	19.29	16.16	13.46	21.13	65.64	82.04	80
75	33.75	31.98	36.27	20.46	12.17	18.83	15.92	13.13	20.81	65.01	81.50	75
70	33.43	31.68	35.75	20.26	12.00	18.46	15.74	12.93	20.59	64.38	81.17	70
65	33.05	31.24	35.29	20.05	11.86	18.22	15.50	12.69	20.42	64.00	80.63	65
60	32.66	30.86	34.83	19.88	11.65	17.92	15.30	12.47	20.18	63.65	80.09	60
55	32.32	30.55	34.44	19.69	11.44	17.67	15.08	12.32	20.01	63.21	79.83	55
50	32.05	30.26	34.00	19.50	11.29	17.53	14.83	12.18	19.80	62.87	79.46	50
45	31.65	30.00	33.80	19.36	11.14	17.31	14.67	12.00	19.66	62.63	79.15	45
40	31.32	29.70	33.33	19.00	11.00	17.00	14.48	11.73	19.54	62.24	78.83	40
35	30.91	29.36	32.67	18.80	10.77	16.74	14.20	11.58	19.35	61.89	78.30	35
30	30.60	28.94	32.12	18.58	10.57	16.50	14.00	11.40	19.05	61.36	77.71	30
25	30.19	28.70	31.76	18.26	10.39	16.26	13.70	11.18	18.83	60.98	77.23	25
20	29.84	28.20	31.28	17.82	10.17	16.00	13.52	10.93	18.50	60.52	76.50	20
15	29.21	27.72	30.65	17.50	9.84	15.66	13.26	10.74	18.24	59.64	75.63	15
10	28.48	27.00	29.74	16.83	9.55	15.09	12.87	10.30	17.84	59.08	74.79	10
5	27.38	25.72	28.54	16.27	9.15	14.29	12.16	9.70	16.89	58.07	72.09	5
Mean	31.84	30.32	34.09	19.33	11.31	17.52	14.84	12.16	19.78	62.93	79.16	Mean
Std Dev	2.75	2.79	3.56	1.80	1.35	2.08	1.67	1.51	1.64	3.08	3.43	Std Dev

TABLE B-4

1986 PERCENTILE DISTRIBUTION OF VARIABLES
GRADE 4 SCHOOLS
N = 384

PER-CEN-TILE	1 GRENROLL	2 PCTLI	3 TUITION	4 TSATPAR	5 TEDUC	6 TPARCONF	8 CLSIZE	9 TOBSERVE	10 LEADER	11 TCHRINIT	PER-CEN-TILE
95	109	55.30	3343	2.75	2.14	4.00	25.76	3.36	29.75	33.25	95
90	91	47.70	2973	2.68	2.00	3.92	25.10	2.96	29.17	32.40	90
85	81	42.50	2712	2.61	1.94	3.83	24.38	2.58	28.50	31.94	85
80	73	39.50	2604	2.53	1.89	3.70	24.00	2.35	27.89	31.57	80
75	68	37.30	2449	2.50	1.84	3.57	23.63	2.24	27.44	31.31	75
70	63	35.40	2408	2.45	1.78	3.43	23.44	2.15	26.90	31.00	70
65	57	32.80	2354	2.42	1.75	3.33	23.15	2.07	26.50	30.74	65
60	53	30.80	2292	2.38	1.71	3.20	22.93	2.00	26.00	30.31	60
55	50	28.90	2179	2.33	1.67	3.12	22.54	2.00	25.65	30.14	55
50	47	26.70	2127	2.31	1.63	3.00	22.37	2.00	25.28	29.88	50
45	45	24.50	2071	2.27	1.60	2.86	22.05	1.92	24.93	29.59	45
40	44	21.40	1980	2.25	1.57	2.75	21.71	1.86	24.59	29.29	40
35	41	19.90	1968	2.20	1.55	2.61	21.29	1.75	24.19	29.06	35
30	37	16.20	1939	2.17	1.52	2.43	21.08	1.61	23.62	28.67	30
25	35	14.70	1899	2.13	1.50	2.33	20.74	1.48	23.00	28.19	25
20	28	11.90	1877	2.07	1.46	2.14	20.41	1.36	22.21	27.95	20
15	24	8.80	1794	2.00	1.42	1.91	19.83	1.21	21.50	27.40	15
10	22	6.80	1739	1.92	1.38	1.63	19.17	1.07	20.66	26.76	10
5	19	5.20	1667	1.76	1.29	1.21	18.22	1.00	18.29	26.00	5
Mean	54	27.33	2254	2.29	1.67	2.86	22.18	1.96	24.91	29.74	Mean
Std Dev	32	16.32	489	0.30	0.27	0.86	2.38	0.69	3.51	2.15	Std Dev

TABLE B-4 (Continued)
1986

PERCENTILE	12 DISRUPTN	13 DISCIPLN	14 PLANNING	15 SCHLCLIM	16 PCTGIRLS	17 PAREDUC	18 RESIDE	19 PCTWHITE	20 MOBILITY	21 SPARINT	22 TVWATCH	PERCENTILE
95	24.43	24.44	20.71	14.38	62.50	2.66	4.95	100.00	0.72	5.24	3.11	95
90	23.79	23.73	19.80	14.13	59.18	2.44	4.00	100.00	0.61	5.14	3.00	90
85	23.31	23.36	19.33	13.87	57.58	2.34	4.00	100.00	0.53	5.05	2.91	85
80	22.82	22.76	18.95	13.67	56.00	2.22	3.89	100.00	0.48	5.00	2.78	80
75	22.50	22.44	18.54	13.50	54.55	2.12	2.90	100.00	0.45	4.94	2.72	75
70	22.08	22.17	18.33	13.30	53.33	2.05	2.00	100.00	0.42	4.91	2.67	70
65	21.75	21.83	18.00	13.09	52.17	2.00	1.34	98.73	0.41	4.86	2.61	65
60	21.33	21.50	17.86	12.86	51.06	1.94	1.04	98.25	0.39	4.82	2.56	60
55	21.09	21.25	17.65	12.71	50.00	1.89	1.00	97.83	0.37	4.77	2.52	55
50	20.75	20.88	17.46	12.54	49.12	1.84	0.94	97.40	0.33	4.73	2.48	50
45	20.46	20.53	17.14	12.35	48.65	1.79	0.83	96.61	0.31	4.69	2.42	45
40	20.15	20.14	16.95	12.13	47.83	1.76	0.71	96.00	0.30	4.65	2.37	40
35	19.86	19.86	16.67	11.80	46.59	1.71	0.62	95.24	0.28	4.61	2.32	35
30	19.57	19.57	16.40	11.56	45.45	1.66	0.50	94.37	0.27	4.57	2.27	30
25	19.14	19.21	16.08	11.33	44.44	1.60	0.41	93.02	0.24	4.52	2.21	25
20	18.75	18.71	15.77	11.00	42.55	1.55	0.33	91.30	0.22	4.48	2.16	20
15	18.18	18.18	15.47	10.71	40.54	1.48	0.22	88.89	0.20	4.41	2.07	15
10	17.90	17.26	14.67	10.29	39.02	1.40	0.09	83.78	0.16	4.33	1.93	10
5	17.27	16.38	13.60	9.40	35.71	1.26	0.00	73.87	0.13	4.19	1.75	5
Mean	20.79	20.73	17.30	12.29	49.30	1.89	1.61	93.55	0.37	4.73	2.46	Mean
Std Dev	2.33	2.53	2.12	1.58	8.45	0.42	1.60	12.01	0.19	0.32	0.41	Std Dev

TABLE B-4 (Continued)
1986

PER-CEN-TILE	25 HOMEREAD	26 TIMEREAD	27 WRITEPAR	28 PLANSWRK	29 STUDYHAB	30 TIMEMATH	44 INTSCHL	PER-CEN-TILE
95	4.13	2.78	3.35	3.28	2.96	2.09	26.96	95
90	4.00	2.67	3.19	3.22	2.91	2.00	26.41	90
85	3.91	2.60	3.10	3.19	2.85	1.96	26.06	85
80	3.78	2.54	3.05	3.15	2.82	1.88	25.77	80
75	3.73	2.51	3.00	3.13	2.79	1.84	25.55	75
70	3.65	2.47	2.94	3.10	2.77	1.79	25.30	70
65	3.61	2.42	2.89	3.07	2.74	1.77	25.10	65
60	3.57	2.38	2.85	3.04	2.69	1.74	24.88	60
55	3.54	2.34	2.83	3.02	2.67	1.73	24.65	55
50	3.48	2.31	2.76	3.00	2.65	1.70	24.56	50
45	3.43	2.27	2.70	2.98	2.63	1.66	24.37	45
40	3.36	2.24	2.67	2.95	2.60	1.63	24.15	40
35	3.30	2.20	2.61	2.93	2.58	1.59	23.87	35
30	3.23	2.16	2.56	2.89	2.55	1.56	23.68	30
25	3.17	2.09	2.53	2.86	2.52	1.52	23.37	25
20	3.06	2.04	2.48	2.83	2.49	1.46	23.12	20
15	2.97	2.00	2.43	2.79	2.44	1.40	22.73	15
10	2.85	1.92	2.38	2.75	2.38	1.36	22.31	10
5	2.67	1.81	2.27	2.64	2.28	1.27	21.88	5
Mean	3.44	2.30	2.77	2.99	2.65	1.69	24.44	Mean
Std Dev	0.44	0.31	0.34	0.20	0.21	0.27	1.67	Std Dev

TABLE C-4

CORRELATION COEFFICIENTS AMONG SCHOOL SCORES
Grade 4
1986 Normative Group
N = 384

		RC	WS	M	AT	SS	AH	ST	EN	HK	SC
Communication Skills: Reading Comprehension	RC										
Communication Skills: Writing Skills	WS	.79									
Mathematics	M	.67	.72								
Analytical Thinking	AT	.80	.79	.70							
Citizenship/Social Studies	SS	.51	.51	.45	.56						
Arts & Humanities	AH	.71	.73	.59	.70	.49					
Science & Technology	ST	.66	.68	.60	.71	.47	.60				
Environment	EN	.64	.62	.59	.66	.41	.54	.71			
Health Knowledge	HK	.75	.69	.59	.73	.56	.66	.68	.68		
Self-Concept in School	SC	.42	.44	.41	.44	.27	.42	.38	.32	.40	
Health & Safety Practices	HP	.50	.51	.46	.52	.30	.36	.42	.33	.44	.50

Note: All correlation coefficients have been rounded to two decimal places.

$r \geq 0.08$ is significant at the .05 level.
$r \geq 0.13$ is significant at the .01 level.

TABLE D-4

CORRELATION COEFFICIENTS BETWEEN
SCHOOL CONDITION VARIABLE SCORES AND SCHOOL SCORES
Grade 4
1986 Normative Group
N = 384

		RC	WS	M	AT	SS	AH	ST	EN	HK	SC	HP*
1	GRENROLL											
2	PCTLI	-.47	-.50	-.43	-.47	-.28	-.55	-.40	-.40	-.41	-.29	-.23
3	TUITION	.18	.27	.23	.20		.34				.20	
4	TSATPAR	.34	.34	.27	.31	.29	.37	.29	.27	.33	.15	.16
5	TEDUC		.19	.20			.22				.16	
6	TPARCONF	.41	.38	.29	.39	.29	.44	.29	.31	.35	.18	.21
8	CLSIZE											
9	TOBSERVE					.17	.14					
10	LEADER		.15	.14	.15	.17	.18	.15	.13	.16		.16
11	TCHRINIT	.28	.24	.20	.27	.25	.26	.25	.27	.27	.21	.15
12	DISRUPTN	.28	.25	.21	.26	.28	.30	.24	.24	.29	.21	.15
13	DISCIPLN	.37	.31	.27	.34	.32	.37	.34	.32	.42	.24	.22
14	PLANNING	.19	.19	.20	.22	.23	.23	.18	.21	.20	.16	
15	SCHLCLIM	.20	.21		.19	.21	.25	.18	.19	.20	.13	
16	PCTGIRLS											
17	PAREDUC	.43	.57	.46	.51	.27	.56	.41	.37	.35	.39	.25
18	RESIDE			.14			.13				.13	
19	PCTWHITE	.32	.26	.21	.29	.22	.26	.36	.32	.45		
20	MOBILITY	-.17	-.18		-.16		-.16	-.15	-.16	-.25		
21	SPARINT	.35	.39	.32	.38	.28	.33	.29	.24	.36	.49	.44
22	TVWATCH	-.36	-.39	-.34	-.37	-.27	-.42	-.35	-.29	-.36	-.28	-.30
25	HOMEREAD	.39	.39	.35	.40	.31	.46	.32	.35	.37	.18	.14
26	TIMEREAD		.15	.14							.21	.19
27	WRITEPAR										.14	
28	PLANSWRK	.26	.29	.30	.25	.18	.25	.22	.19	.21	.45	.29
29	STUDYHAB	.18	.24	.29	.24		.21	.16	.15	.19	.46	.32
30	TIMEMATH	-.14							-.17	-.15		
44	INTSCHL	.24	.19	.20	.20		.16	.24	.20	.16	.55	.48

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .13$).

*See Table C-4 as key to area identification.

TABLE E-4
CORRELATION COEFFICIENTS AMONG
SCHOOL CONDITION VARIABLE SCORES
Grade 4, 1986 Normative Group, N = 384

		1	2	3	4	5	6	8	9	10	11	12	13	14	15
1	GRENROLL														
2	PCTLI														
3	TUITION		-.33												
4	TSATPAR		-.48												
5	TEDUC		-.19	.39											
6	TPARCONF		-.56		.46										
8	CLSIZE	.34		-.28											
9	TOBSERVE			.22	.13			-.15							
10	LEADER		-.17	.14	.26	.16	.17		.15						
11	TCHRINIT	-.16	-.22		.47		.34			.46					
12	DISRUPTN	-.24	-.30		.48		.36			.48	.65				
13	DISCIPLN	-.21	-.36		.63		.40			.54	.63	.77			
14	PLANNING		-.33		.42		.28		.30	.51	.45	.45	.49		
15	SCHLCLIM		-.27		.36		.25			.43	.45	.50	.52	.48	
16	PCTGIRLS														
17	PAREDUC	.14	-.49	.57	.26	.26	.29			.15	.19		.15	.18	.13
18	RESIDE	.15		.62		.27		-.16	.15				-.14		
19	PCTWHITE	-.16	-.26	-.30	.28		.22	.14				.25	.33		.18
20	MOBILITY			.23	-.17								-.21		
21	SPARINT		-.30	.17	.20		.20			.15	.17	.19	.20	.15	.20
22	TVWATCH		.41	-.18	-.24		-.31			-.17	-.14	-.17	-.21	-.24	-.18
25	HOMEREAD		-.50		.34		.28				.17	.19	.28	.22	.20
26	TIMEREAD							.14							
27	WRITEPAR			.17											
28	PLANSWRK		-.20		.14		.14								
29	STUDYHAB		-.19		.14									.13	
30	TIMEMATH														
44	INTSCHL														

		16	17	18	19	20	21	22	25	26	27	28	29	30
17	PAREDUC													
18	RESIDE		.41											
19	PCTWHITE			-.46										
20	MOBILITY			.26	-.44									
21	SPARINT		.36	.15	.14									
22	TVWATCH		-.41		-.24		-.28							
25	HOMEREAD		.41		.20		.14	-.31						
26	TIMEREAD		.19				.19	-.19	.20					
27	WRITEPAR		.14		-.14				.21	.18				
28	PLANSWRK		.22				.31	-.16	.24	.19	.25			
29	STUDYHAB		.26				.34	-.18	.20	.25	.19	.66		
30	TIMEMATH				-.18					.21	.21			
44	INTSCHL						.43	-.19		.30		.17	.25	.19

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .13$).

TABLE A-6

1986 PENNSYLVANIA SCHOOL NORMS
GRADE 6 SCHOOLS
N = 349

PER-CEN-TILE	Reading Compre-hension	Writing Skills	Mathe-matics	Analyti-cal Thinking	Social Studies	Arts & Humani-ties	Science & Tech-nology	Environ-ment	Health Knowl-edge	Self-Concept	Health Prac-tices	PER-CEN-TILE
95	37.33	45.95	47.40	25.50	33.22	26.00	24.06	18.00	38.00	68.29	87.31	95
90	35.63	44.96	46.41	24.86	32.00	24.88	23.24	17.50	36.82	66.27	84.78	90
85	35.06	44.14	45.74	24.61	31.23	24.23	22.95	17.19	36.09	65.09	83.65	85
80	34.46	43.62	45.14	24.13	30.76	23.76	22.61	16.96	35.68	64.38	83.17	80
75	34.02	43.06	44.29	23.89	30.42	23.33	22.37	16.73	35.28	63.53	82.68	75
70	33.70	42.49	43.78	23.70	30.15	22.91	22.14	16.55	34.98	63.00	82.11	70
65	33.42	42.00	43.34	23.50	29.85	22.59	21.88	16.30	34.73	62.59	81.71	65
60	33.00	41.61	42.88	23.31	29.66	22.26	21.69	16.09	34.50	62.33	81.42	60
55	32.69	41.22	42.51	23.09	29.28	21.93	21.57	15.78	34.16	61.97	80.95	55
50	32.39	40.96	42.20	22.94	29.05	21.64	21.31	15.57	33.75	61.56	80.51	50
45	32.12	40.60	41.73	22.68	28.89	21.36	21.12	15.44	33.36	61.30	80.18	45
40	31.65	40.22	41.30	22.55	28.61	21.00	20.92	15.15	33.12	61.05	79.59	40
35	31.28	39.74	41.03	22.33	28.34	20.68	20.68	14.95	32.74	60.68	79.04	35
30	30.94	39.23	40.54	22.05	27.94	20.40	20.39	14.69	32.36	60.29	78.57	30
25	30.44	38.87	39.91	21.75	27.58	20.04	20.11	14.45	32.08	59.80	78.18	25
20	29.95	38.31	39.34	21.43	27.12	19.74	19.58	14.13	31.62	59.06	77.85	20
15	29.48	37.68	38.78	21.12	26.44	19.35	19.22	13.75	30.82	58.47	77.34	15
10	28.85	36.96	37.86	20.57	25.67	18.79	18.68	13.15	30.24	58.07	76.23	10
5	27.40	34.90	36.51	19.18	23.96	17.50	17.59	12.40	28.39	57.18	74.69	5
Mean	32.24	40.77	42.10	22.76	28.87	21.65	21.11	15.47	33.52	61.91	80.53	Mean
Std Dev	3.05	3.30	3.32	1.89	2.69	2.63	1.96	1.77	2.98	3.28	3.47	Std Dev

TABLE B-6

1986 PERCENTILE DISTRIBUTION OF VARIABLES
GRADE 6 SCHOOLS
N = 349

PER-CEN-TILE	1 GRENROLL	2 PCTLI	3 TUITION	4 TSATPAR	5 TEDUC	6 TPARCONF	8 CLSIZE	9 TOBSERVE	10 LEADER	11 TCHRINIT	PER-CEN-TILE
95	199	52.60	3396	2.71	2.17	4.00	26.71	3.18	29.52	32.57	95
90	157	46.00	3136	2.63	2.06	3.77	25.75	2.92	29.08	31.83	90
85	122	42.80	2677	2.56	2.00	3.67	25.36	2.59	28.35	31.43	85
80	100	39.50	2649	2.50	1.93	3.53	24.86	2.35	27.69	30.93	80
75	84	36.90	2514	2.46	1.88	3.40	24.31	2.25	27.17	30.50	75
70	78	35.30	2427	2.41	1.83	3.31	23.93	2.15	26.75	30.08	70
65	71	32.60	2361	2.33	1.77	3.17	23.59	2.08	26.14	29.69	65
60	67	31.00	2306	2.31	1.73	3.05	23.40	2.00	25.80	29.50	60
55	63	29.00	2179	2.27	1.70	2.93	23.00	2.00	25.33	29.22	55
50	58	26.00	2117	2.24	1.67	2.77	22.53	2.00	25.00	29.00	50
45	52	24.40	2071	2.19	1.65	2.65	22.25	1.91	24.65	28.56	45
40	49	21.90	1999	2.15	1.62	2.48	22.00	1.80	24.21	28.28	40
35	46	19.10	1973	2.11	1.60	2.33	21.67	1.63	23.47	28.00	35
30	42	16.70	1956	2.08	1.57	2.17	21.33	1.48	22.93	27.87	30
25	39	13.90	1921	2.03	1.52	2.00	20.93	1.34	21.90	27.50	25
20	32	11.40	1898	1.97	1.50	1.75	20.33	1.25	21.30	27.17	20
15	28	8.90	1841	1.88	1.45	1.45	19.75	1.13	20.58	26.81	15
10	24	6.90	1760	1.80	1.42	1.07	19.24	1.06	19.67	26.23	10
5	20	5.00	1667	1.67	1.33	0.60	18.20	1.00	18.26	25.60	5
Mean	73	26.87	2272	2.22	1.71	2.60	22.50	1.91	24.43	28.96	Mean
Std Dev	54	15.59	496	0.33	0.26	1.01	2.84	0.69	3.90	2.22	Std Dev

TABLE B-6 (Continued)
1986

PERCENTILE	12 DISRUPTN	13 DISCIPLN	14 PLANNING	15 SCHLCLIM	16 PCTGIRLS	17 PAREDUC	18 RESIDE	19 PCTWHITE	20 MOBILITY	21 SPARINT	22 TVWATCH	PERCENTILE
95	24.28	23.71	20.38	14.29	61.64	2.57	5.00	100.00	0.63	5.05	3.07	95
90	23.50	23.26	19.56	13.94	58.27	2.36	4.05	100.00	0.54	4.93	2.92	90
85	22.63	22.92	19.15	13.68	56.25	2.26	4.00	100.00	0.48	4.87	2.83	85
80	22.22	22.62	18.50	13.49	54.46	2.16	3.94	100.00	0.42	4.79	2.76	80
75	21.71	22.31	18.25	13.31	53.21	2.09	3.64	100.00	0.39	4.74	2.70	75
70	21.38	21.86	18.00	13.12	52.38	1.98	2.32	99.12	0.36	4.69	2.63	70
65	21.15	21.47	17.71	12.89	51.78	1.92	1.38	98.48	0.33	4.63	2.57	65
60	20.69	21.00	17.42	12.73	51.06	1.86	1.05	98.04	0.31	4.58	2.52	60
55	20.52	20.71	17.14	12.55	50.00	1.80	1.00	97.62	0.29	4.54	2.49	55
50	20.23	20.43	16.94	12.35	50.00	1.74	1.00	97.26	0.28	4.48	2.45	50
45	20.00	20.13	16.76	12.10	48.98	1.71	0.93	96.67	0.26	4.45	2.40	45
40	19.64	19.76	16.40	11.90	47.83	1.65	0.77	95.92	0.24	4.42	2.34	40
35	19.32	19.44	16.10	11.67	46.88	1.61	0.67	95.24	0.22	4.37	2.30	35
30	18.93	19.14	15.73	11.42	45.83	1.58	0.58	94.59	0.21	4.32	2.26	30
25	18.38	18.88	15.47	11.18	45.00	1.54	0.43	93.62	0.19	4.29	2.19	25
20	18.11	18.26	15.20	10.80	44.44	1.50	0.34	92.31	0.17	4.22	2.14	20
15	17.80	17.74	14.78	10.43	42.86	1.42	0.24	88.89	0.16	4.15	2.06	15
10	17.33	16.90	14.00	10.00	40.48	1.33	0.11	83.08	0.13	4.05	1.96	10
5	16.00	15.69	13.00	9.17	37.18	1.22	0.00	68.60	0.08	3.84	1.79	5
Mean	20.19	20.22	16.84	12.07	49.33	1.82	1.72	92.92	0.31	4.48	2.44	Mean
Std Dev	2.48	2.71	2.19	1.68	7.34	0.41	1.67	13.64	0.18	0.37	0.38	Std Dev

TABLE B-6 (Continued)
1986

PER-CEN-TILE	25 HOMEREAD	26 TIMEREAD	27 WRITEPAR	29 STUDYHAB	30 TIMEMATH	31 TESTFREQ	44 INTSCHL	PER-CEN-TILE
95	4.08	2.67	3.17	2.83	2.24	3.51	27.17	95
90	3.94	2.55	3.07	2.70	2.15	3.33	26.74	90
85	3.84	2.47	3.00	2.64	2.09	3.19	26.25	85
80	3.74	2.42	2.95	2.61	2.02	3.06	25.84	80
75	3.68	2.36	2.90	2.57	1.99	3.00	25.65	75
70	3.63	2.30	2.88	2.54	1.96	2.93	25.38	70
65	3.59	2.26	2.84	2.51	1.91	2.88	25.19	65
60	3.54	2.24	2.80	2.48	1.88	2.84	24.97	60
55	3.48	2.20	2.76	2.46	1.85	2.75	24.79	55
50	3.41	2.16	2.72	2.43	1.82	2.70	24.65	50
45	3.36	2.14	2.68	2.41	1.78	2.65	24.53	45
40	3.32	2.11	2.64	2.38	1.75	2.60	24.26	40
35	3.27	2.07	2.60	2.35	1.72	2.54	24.06	35
30	3.21	2.03	2.54	2.31	1.69	2.47	23.88	30
25	3.12	2.00	2.49	2.29	1.64	2.40	23.71	25
20	3.05	1.96	2.42	2.25	1.60	2.33	23.45	20
15	2.94	1.91	2.38	2.20	1.56	2.26	23.23	15
10	2.83	1.83	2.32	2.13	1.50	2.17	22.72	10
5	2.65	1.68	2.14	2.04	1.44	2.03	22.28	5
Mean	3.40	2.18	2.70	2.43	1.82	2.72	24.70	Mean
Std Dev	0.45	0.30	0.34	0.23	0.26	0.46	1.52	Std Dev

TABLE C-6

CORRELATION COEFFICIENTS AMONG SCHOOL SCORES
Grade 6
1986 Normative Group
N = 349

		RC	WS	M	AT	SS	AH	ST	EN	HK	SC
Communication Skills: Reading Comprehension	RC										
Communication Skills: Writing Skills	WS	.83									
Mathematics	M	.74	.74								
Analytical Thinking	AT	.83	.77	.69							
Citizenship/Social Studies	SS	.81	.77	.68	.75						
Arts & Humanities	AH	.79	.82	.66	.72	.76					
Science & Technology	ST	.75	.71	.61	.72	.74	.68				
Environment	EN	.79	.71	.61	.68	.77	.73	.76			
Health Knowledge	HK	.83	.74	.64	.78	.77	.73	.73	.78		
Self-Concept in School	SC	.30	.29	.30	.30	.25	.31	.19	.17	.27	
Health & Safety Practices	HP	.19	.16	.21	.23	.18	.17	.08	.16	.16	.42

Note: All correlation coefficients have been rounded to two decimal places.

$r \geq 0.08$ is significant at the .05 level.
$r \geq 0.14$ is significant at the .01 level.

TABLE D-6

CORRELATION COEFFICIENTS BETWEEN
SCHOOL CONDITION VARIABLE SCORES AND SCHOOL SCORES
Grade 6
1986 Normative Group
N = 349

		RC	WS	M	AT	SS	AH	ST	EN	HK	SC	HP*	
1	GRENROLL	-.15									-.16	-.14	1
2	PCTLI	-.47	-.59	-.46	-.46	-.46	-.64	-.43	-.42	-.42			2
3	TUITION		.15				.23				.17		3
4	TSATPAR	.47	.49	.43	.44	.42	.48	.38	.37	.44	.30		4
5	TEDUC		.15				.17						5
6	TPARCONF	.36	.43	.34	.35	.34	.39	.23	.31	.31	.25		6
8	CLSIZE												8
9	TOBSERVE												9
10	LEADER	.14	.15			.17	.20	.18	.19	.16			10
11	TCHRINIT	.34	.31	.25	.26	.32	.32	.24	.26	.30	.27	.19	11
12	DISRUPTN	.43	.42	.38	.37	.42	.43	.36	.39	.43	.31	.23	12
13	DISCIPLN	.45	.43	.40	.41	.45	.46	.40	.43	.47	.31	.23	13
14	PLANNING	.30	.32	.24	.29	.30	.33	.23	.26	.26	.14	.18	14
15	SCHLCLIM	.31	.31	.25	.30	.29	.33	.32	.31	.29	.16		15
16	PCTGIRLS											.15	16
17	PAREDUC	.40	.54	.36	.42	.43	.60	.43	.36	.32	.23		17
18	RESIDE	-.26			-.16	-.24		-.27	-.35	-.35			18
19	PCTWHITE	.53	.41	.36	.42	.50	.43	.53	.53	.60			19
20	MOBILITY	-.34	-.30	-.28	-.25	-.31	-.23	-.36	-.34	-.38			20
21	SPARINT	.36	.35	.35	.37	.32	.39	.30	.32	.30	.60	.42	21
22	TVWATCH	-.36	-.41	-.33	-.35	-.38	-.42	-.38	-.40	-.35		-.21	22
25	HOMEREAD	.54	.57	.47	.49	.52	.61	.47	.51	.51	.27		25
26	TIMEREAD	.24	.21	.20	.26	.17	.24	.16	.18	.15	.32	.35	26
27	WRITEPAR			.15							.17	.16	27
29	STUDYHAB	.31	.34	.31	.27	.32	.40	.20	.19	.25	.55	.32	29
30	TIMEMATH	-.20	-.22			-.17	-.19	-.18	-.19	-.20		.19	30
31	TESTFREQ		-.19				-.19		-.14				31
44	INTSCHL										.61	.61	44

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .14$).

*See Table C-6 as key to area identification.

TABLE E-6
CORRELATION COEFFICIENTS AMONG
SCHOOL CONDITION VARIABLE SCORES
Grade 6, 1986 Normative Group, N = 349

		1	2	3	4	5	6	8	9	10	11	12	13	14	15
1	GRENROLL														
2	PCTLI														
3	TUITION		-.33												
4	TSATPAR	-.22	-.52												
5	TEDUC		-.20	.44											
6	TPARCONF	-.39	-.43	.16	.55										
8	CLSIZE	.34		-.22											
9	TOBSERVE		-.14	.22											
10	LEADER		-.22	.18	.33	.17	.22		.15						
11	TCHRINIT	-.38	-.30	.14	.56		.49			.40					
12	DISRUPTN	-.32	-.39		.60		.47			.50	.68				
13	DISCIPLN	-.31	-.41		.70		.46			.56	.67	.80			
14	PLANNING	-.16	-.37	.18	.48		.40		.24	.58	.50	.52	.56		
15	SCHLCLIM		-.28		.45		.26			.37	.42	.51	.55	.54	
16	PCTGIRLS														
17	PAREDUC	.14	-.54	.51	.29	.32	.25			.17	.20	.19	.20	.23	.16
18	RESIDE			.63		.29			.20				-.17		
19	PCTWHITE	-.17	-.30	-.31	.39		.15			.16	.22	.33	.41	.15	.30
20	MOBILITY	.18		.28	-.17	.15	-.15					-.18	-.16		
21	SPARINT		-.26	.25	.30		.22			.23	.27	.36	.35	.25	.33
22	TVWATCH		.36		-.28		-.16					-.22	-.28	-.14	-.17
25	HOMEREAD		-.58		.41		.28				.26	.32	.34	.29	.30
26	TIMEREAD		-.18											.17	
27	WRITEPAR			.22			.15								
29	STUDYHAB		-.27	.21	.27		.22			.17	.30	.29	.31	.27	
30	TIMEMATH														
31	TESTFREQ		.26												
44	INTSCHL										.17	.17	.15		

		16	17	18	19	20	21	22	25	26	27	29	30	31	44
16	PCTGIRLS														
17	PAREDUC														
18	RESIDE		.29												
19	PCTWHITE			-.52											
20	MOBILITY			.38	-.47										
21	SPARINT		.41		.15										
22	TVWATCH		-.29		-.28		-.32								
25	HOMEREAD		.56	-.16	.39	-.25	.26	-.31							
26	TIMEREAD	.27	.21				.33	-.20	.29						
27	WRITEPAR				-.16		.17		.17	.17					
29	STUDYHAB		.38	.14			.45		.32	.39	.19				
30	TIMEMATH			.16	-.23	.16			-.18	.15					
31	TESTFREQ							.19							
44	INTSCHL						.54	-.17		.33	.24	.34	.25	.14	

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .14$).

TABLE A-7

1986 PENNSYLVANIA SCHOOL NORMS
GRADE 7 SCHOOLS
N = 156

PERCENTILE	Reading Comprehension	Writing Skills	Mathematics	Analytical Thinking	Social Studies	Arts & Humanities	Science & Technology	Environment	Self-Concept	Health Practices	PERCENTILE
95	32.50	43.55	34.01	19.42	35.06	30.69	20.89	21.54	64.83	104.75	95
90	31.38	42.96	33.21	19.08	33.81	30.03	20.44	21.07	63.76	103.23	90
85	31.18	42.50	32.78	18.99	33.39	29.60	20.17	20.80	63.36	102.40	85
80	31.03	42.09	32.08	18.83	32.93	28.96	19.88	20.59	62.96	101.50	80
75	30.60	41.76	31.42	18.41	32.67	28.59	19.53	20.44	62.49	100.97	75
70	30.07	41.28	31.13	18.30	32.10	28.09	19.41	20.17	62.28	100.57	70
65	29.81	40.91	30.98	18.01	31.75	27.37	19.28	19.91	61.97	100.23	65
60	29.53	40.55	30.49	17.85	31.58	27.06	19.05	19.76	61.56	99.59	60
55	29.24	40.26	30.25	17.65	31.24	26.70	18.77	19.52	61.30	99.17	55
50	28.99	39.69	29.53	17.35	30.85	26.47	18.54	19.32	60.98	98.77	50
45	28.49	39.48	29.15	17.17	30.46	26.30	18.32	19.21	60.56	98.05	45
40	28.11	39.26	28.68	16.90	29.83	26.16	18.08	18.87	60.22	97.65	40
35	27.87	38.78	28.21	16.73	29.61	25.90	17.88	18.65	60.01	97.25	35
30	27.45	38.22	27.89	16.55	29.30	25.39	17.62	18.30	59.45	96.70	30
25	27.00	37.81	27.59	16.30	28.71	24.98	17.30	18.04	58.91	96.29	25
20	26.57	36.93	27.25	15.96	28.06	24.51	16.93	17.75	58.45	95.36	20
15	25.89	36.29	26.25	15.67	27.72	24.00	16.63	17.33	57.81	95.06	15
10	25.11	35.54	25.37	15.45	26.68	23.38	16.32	16.85	57.48	93.69	10
5	24.50	33.62	24.48	14.73	25.71	22.33	15.59	16.35	56.53	93.13	5
Mean	28.57	39.48	29.47	17.29	30.56	26.62	18.39	19.16	60.79	98.67	Mean
Std Dev	2.67	3.02	3.14	1.59	2.90	2.65	1.75	1.81	2.60	3.76	Std Dev

TABLE B-7

1986 PERCENTILE DISTRIBUTION OF VARIABLES
GRADE 7 SCHOOLS
N = 156

PER-CEN-TILE	1 GRENROLL	2 PCTLI	3 TUITION	4 TSATPAR	5 TEDUC	8 CLSIZE	9 TOBSERVE	10 LEADER	11 TCHRINIT	PER-CEN-TILE
95	300	51.50	3483	2.39	2.10	26.57	3.08	28.26	29.55	95
90	257	44.30	3141	2.32	2.04	25.80	2.61	27.23	29.02	90
85	241	42.20	3062	2.23	1.97	25.36	2.50	26.88	28.75	85
80	217	39.20	2953	2.18	1.90	24.85	2.34	25.82	28.40	80
75	209	36.20	2891	2.15	1.86	24.52	2.19	25.23	28.04	75
70	194	33.40	2756	2.10	1.84	24.04	2.14	24.70	27.62	70
65	181	31.70	2621	2.08	1.80	23.70	2.09	24.14	27.47	65
60	162	30.40	2539	2.05	1.77	23.47	2.04	23.71	27.22	60
55	151	27.60	2453	2.00	1.74	23.34	1.96	22.96	27.00	55
50	139	25.30	2423	1.97	1.69	23.00	1.90	22.30	26.71	50
45	135	23.80	2359	1.94	1.67	22.65	1.80	21.98	26.60	45
40	130	21.00	2309	1.89	1.64	22.40	1.54	21.53	26.33	40
35	119	18.10	2281	1.85	1.61	22.14	1.41	21.14	26.12	35
30	111	15.50	2228	1.82	1.57	21.98	1.33	20.85	25.82	30
25	94	14.90	2211	1.80	1.54	21.73	1.27	20.38	25.49	25
20	90	12.40	2165	1.75	1.50	21.30	1.20	20.12	25.17	20
15	80	10.90	2104	1.70	1.46	20.74	1.12	19.15	24.89	15
10	77	8.70	2085	1.65	1.40	20.20	1.08	17.65	23.93	10
5	63	6.20	1958	1.54	1.35	19.24	1.00	16.12	22.70	5
Mean	159	26.46	2561	1.97	1.72	22.99	1.85	22.49	26.66	Mean
Std Dev	80	14.52	496	0.27	0.24	2.36	0.68	3.92	2.05	Std Dev

TABLE B-7 (Continued)
1986

PERCENTILE	12 DISRUPTN	13 DISCIPLN	14 PLANNING	15 SCHLCLIM	16 PCTGIRLS	17 PAREDUC	18 RESIDE	19 PCTWHITE	20 MOBILITY	21 SPARINT	22 TVWATCH	PERCENTILE
95	21.70	22.53	18.69	13.86	55.32	2.37	4.71	98.99	0.60	4.76	2.79	95
90	21.19	21.95	17.55	13.26	53.47	2.21	4.20	98.73	0.55	4.66	2.68	90
85	20.81	21.42	17.28	13.06	52.52	2.08	3.91	98.50	0.49	4.63	2.58	85
80	20.51	20.75	17.05	12.87	51.69	1.96	3.64	97.92	0.47	4.55	2.52	80
75	20.04	20.39	16.83	12.76	50.57	1.93	2.70	97.65	0.44	4.50	2.49	75
70	19.56	19.97	16.53	12.37	50.00	1.89	2.06	97.39	0.43	4.47	2.46	70
65	19.41	19.69	16.25	12.15	49.70	1.86	1.98	97.28	0.41	4.43	2.42	65
60	18.93	19.44	16.02	11.87	49.32	1.82	1.41	97.06	0.39	4.39	2.38	60
55	18.64	19.12	15.60	11.71	48.91	1.77	1.11	96.64	0.37	4.37	2.35	55
50	18.33	18.91	15.39	11.56	48.48	1.74	1.02	96.30	0.36	4.32	2.33	50
45	18.12	18.30	15.22	11.50	47.83	1.69	1.00	96.20	0.34	4.27	2.32	45
40	17.82	17.97	15.00	11.37	47.46	1.63	0.92	95.87	0.33	4.25	2.30	40
35	17.65	17.74	14.75	11.13	46.95	1.59	0.76	95.12	0.31	4.20	2.22	35
30	17.48	17.35	14.33	10.88	46.40	1.54	0.70	94.44	0.29	4.17	2.21	30
25	17.32	17.08	14.00	10.50	45.39	1.52	0.65	93.45	0.26	4.14	2.17	25
20	16.84	16.47	13.64	10.17	44.74	1.50	0.58	92.70	0.24	4.09	2.14	20
15	16.14	16.10	13.10	9.36	43.71	1.46	0.46	91.54	0.21	4.04	2.08	15
10	15.45	15.26	12.52	8.80	43.10	1.40	0.35	84.62	0.19	3.96	2.01	10
5	14.56	13.34	11.84	8.00	41.77	1.37	0.18	70.97	0.16	3.87	1.96	5
Mean	18.47	18.54	15.31	11.40	48.33	1.77	1.75	92.49	0.37	4.31	2.34	Mean
Std Dev	2.34	2.86	2.07	1.71	4.27	0.33	1.49	13.06	0.14	0.31	0.26	Std Dev

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TABLE B-7 (Continued)
1986

PER-CEN-TILE	23 PAREXP	24 EDEXPECT	25 HOMEREAD	26 TIMEREAD	27 WRITEPAR	29 STUDYHAB	30 TIMEMATH	31 TESTFREQ	32 TESTRETN	33 CLDISCIP	PER-CEN-TILE
95	2.68	2.84	3.95	2.36	3.04	2.46	2.04	3.08	2.74	2.38	95
90	2.57	2.78	3.79	2.31	2.88	2.42	2.01	3.06	2.68	2.33	90
85	2.52	2.70	3.74	2.27	2.84	2.40	1.97	3.01	2.66	2.30	85
80	2.43	2.64	3.68	2.21	2.80	2.37	1.94	2.97	2.60	2.27	80
75	2.41	2.61	3.63	2.19	2.74	2.36	1.91	2.93	2.55	2.24	75
70	2.37	2.56	3.54	2.17	2.70	2.34	1.88	2.90	2.52	2.20	70
65	2.32	2.52	3.52	2.13	2.65	2.31	1.86	2.87	2.47	2.19	65
60	2.29	2.49	3.49	2.11	2.62	2.29	1.84	2.85	2.43	2.17	60
55	2.25	2.44	3.45	2.09	2.60	2.27	1.81	2.81	2.39	2.16	55
50	2.23	2.38	3.41	2.06	2.56	2.25	1.77	2.77	2.36	2.13	50
45	2.19	2.35	3.37	2.04	2.54	2.24	1.76	2.74	2.33	2.12	45
40	2.16	2.33	3.34	2.01	2.51	2.22	1.73	2.71	2.29	2.09	40
35	2.13	2.30	3.30	1.97	2.48	2.21	1.71	2.66	2.27	2.07	35
30	2.09	2.25	3.25	1.95	2.43	2.17	1.69	2.61	2.24	2.05	30
25	2.05	2.22	3.22	1.93	2.39	2.14	1.66	2.59	2.18	2.02	25
20	2.00	2.17	3.15	1.90	2.34	2.11	1.63	2.55	2.14	1.98	20
15	1.92	2.13	3.03	1.87	2.30	2.07	1.59	2.51	2.08	1.96	15
10	1.86	2.06	2.91	1.82	2.26	2.03	1.56	2.40	2.01	1.84	10
5	1.81	2.00	2.79	1.73	2.22	1.98	1.50	2.31	1.98	1.77	5
Mean	2.23	2.41	3.40	2.06	2.58	2.25	1.78	2.76	2.36	2.11	Mean
Std Dev	0.27	0.27	0.35	0.20	0.26	0.15	0.19	0.26	0.26	0.19	Std Dev

TABLE B-7 (Continued)
1986

PER-CEN-TILE	36 MATHINST	37 ENGLINST	38 SCIINST	39 SOCINST	44 INTSCHL	PER-CEN-TILE
95	4.71	4.80	5.29	5.46	55.96	95
90	4.53	4.52	5.16	5.26	54.93	90
85	4.46	4.46	5.07	5.16	54.10	85
80	4.38	4.39	5.01	5.08	53.35	80
75	4.29	4.32	4.89	4.99	53.11	75
70	4.24	4.23	4.82	4.89	52.84	70
65	4.20	4.20	4.77	4.86	52.48	65
60	4.18	4.15	4.72	4.79	52.17	60
55	4.13	4.11	4.65	4.68	51.75	55
50	4.08	4.08	4.57	4.62	51.35	50
45	4.06	4.07	4.52	4.58	51.21	45
40	4.01	4.04	4.41	4.53	50.83	40
35	3.96	3.98	4.35	4.50	50.36	35
30	3.92	3.92	4.27	4.46	49.78	30
25	3.90	3.87	4.22	4.39	49.36	25
20	3.85	3.82	4.10	4.26	48.91	20
15	3.79	3.78	4.00	4.15	47.98	15
10	3.66	3.69	3.89	4.03	47.10	10
5	3.50	3.63	3.64	3.92	46.12	5
Mean	4.10	4.12	4.53	4.67	51.27	Mean
Std Dev	0.35	0.37	0.52	0.47	3.13	Std Dev

TABLE C-7

CORRELATION COEFFICIENTS AMONG SCHOOL SCORES
Grade 7
1986 Normative Group
N = 156

		RC	WS	M	AT	SS	AH	ST	EN	SC
Communication Skills: Reading Comprehension	RC									
Communication Skills: Writing Skills	WS	.84								
Mathematics	M	.75	.77							
Analytical Thinking	AT	.87	.81	.71						
Citizenship/Social Studies	SS	.83	.79	.74	.85					
Arts & Humanities	AH	.85	.81	.76	.79	.78				
Science & Technology	ST	.83	.79	.72	.84	.83	.72			
Environment	EN	.74	.68	.57	.73	.71	.68	.80		
Self-Concept in School	SC	.28	.32	.25	.38	.35	.31	.29	.17	
Health & Safety Practices	HP	.25	.19	.08	.30	.29	.19	.16	.16	.57

Note: All correlation coefficients have been rounded to two decimal places.

$r \geq 0.16$ is significant at the .05 level.
$r \geq 0.21$ is significant at the .01 level.

TABLE D-7

CORRELATION COEFFICIENTS BETWEEN
SCHOOL CONDITION VARIABLE SCORES AND SCHOOL SCORES
Grade 7
1986 Normative Group
N = 156

		RC	WS	M	AT	SS	AH	ST	EN	SC	HP*	
1	GRENROLL											1
2	PCTLI	-.55	-.67	-.59	-.54	-.51	-.67	-.50	-.49	-.26		2
3	TUITION									.26		3
4	TSATPAR	.58	.56	.52	.60	.54	.61	.58	.49	.34		4
5	TEDUC		.27		.21		.29					5
8	CLSIZE				.23			.22	.22			8
9	TOBSERVE	.32	.27	.23	.32	.24	.35	.31	.29			9
10	LEADER	.35	.32	.26	.30	.30	.38	.23	.22			10
11	TCHRINIT	.41	.43	.33	.46	.44	.50	.40	.33	.36		11
12	DISRUPTN	.53	.50	.41	.50	.49	.57	.46	.39	.28	.22	12
13	DISCIPLN	.59	.52	.46	.53	.52	.56	.54	.45	.28	.21	13
14	PLANNING	.35	.39	.26	.38	.39	.43	.30	.34	.22		14
15	SCHLCLIM	.54	.46	.44	.49	.44	.53	.44	.41			15
16	PCTGIRLS											16
17	PAREDUC	.45	.55	.54	.45	.45	.58	.41	.32	.35		17
18	RESIDE							-.22	-.23			18
19	PCTWHITE	.54	.47	.45	.47	.49	.42	.56	.54			19
20	MOBILITY	-.31	-.23		-.22	-.30	-.22	-.31	-.36			20
21	SPARINT	.53	.58	.47	.51	.48	.60	.45	.37	.56	.36	21
22	TVWATCH	-.48	-.47	-.47	-.37	-.39	-.52	-.40	-.39			22
23	PAREXP		.27	.26	.24	.24	.27			.42		23
24	EDEXPECT	.23	.34	.31	.29	.31	.36	.21		.48		24
25	HOMEREAD	.67	.66	.63	.60	.63	.65	.65	.56	.25		25
26	TIMEREAD									.28	.32	26
27	WRITEPAR											27
29	STUDYHAB	.36	.42	.36	.41	.39	.40	.29	.23	.65	.43	29
30	TIMEMATH											30
31	TESTFREQ											31
32	TESTRETN	.44	.42	.42	.40	.50	.43	.51	.42			32
33	CLDISCIP	.55	.51	.44	.55	.54	.53	.48	.43	.39	.34	33
36	MATHINST											36
37	ENGLINST											37
38	SCIINST											38
39	SOCINST											39
44	INTSCHL	.26	.21		.31	.32	.25	.26		.75	.62	44

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .21$).

*See Table C-7 as key to area identification.

TABLE E-7
CORRELATION COEFFICIENTS AMONG
SCHOOL CONDITION VARIABLE SCORES
Grade 7, 1986 Normative Group, N = 156

		1	2	3	4	5	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	GRENROLL																				
2	PCTLI																				
3	TUITION		-.21																		
4	TSATPAR		-.56																		
5	TEDUC		-.34	.49	.22																
8	CLSIZE	.41		-.22																	
9	TOBSERVE				.27																
10	LEADER		-.23		.43			.26													
11	TCHRINIT		-.31		.61		.21	.23	.58												
12	DISRUPTN		-.34		.62			.25	.67	.70											
13	DISCIPLN		-.39		.67			.28	.66	.70	.80										
14	PLANNING		-.37		.58			.31	.63	.59	.54	.55									
15	SCHLCLIM		-.39		.60			.24	.52	.52	.63	.65	.58								
16	PCTGIRLS																				
17	PAREDUC	.26	-.53	.53	.52	.50		.21	.25	.43	.31	.30	.24	.31							
18	RESIDE	.34		.64		.44										.46					
19	PCTWHITE		-.37	-.45	.35						.32	.41		.26			-.54				
20	MOBILITY	.34		.42		.24					-.27	-.32					.55	-.54			
21	SPARINT		-.45	.28	.53	.33			.30	.44	.45	.45	.33	.49		.55	.24	.23			
22	TVWATCH		.42		-.32			-.26			-.26	-.26		-.27		-.23		-.31		-.35	
23	PAREXP		-.26	.53	.31	.38				.32						.81	.54		.34	.47	
24	EDEXPECT	.22	-.35	.55	.39	.38			.22	.39	.23		.23	.22		.84	.53		.27	.53	
25	HOMEREAD		-.61		.56	.25		.24	.33	.43	.41	.46	.36	.45		.58		.34		.46	-.42
26	TIMEREAD														.23	.26				.27	
27	WRITEPAR			.23															.23		
29	STUDYHAB		-.32	.30	.23	.24				.30	.22	.28		.22		.45				.58	
30	TIMEMATH																	-.23			
31	TESTFREQ																				
32	TESTRETN		-.37		.33					.22	.34	.36	.26	.34			-.31	.46	-.37	.25	-.40
33	CLDISCIP		-.34		.42					.25	.35	.46	.23	.29				.48	-.25	.56	-.35
36	MATHINST																				
37	ENGLINST																				
38	SCIINST																				
39	SOCINST					.29															
44	INTSCH				.27					.32	.34	.29	.29	.22						.49	

		23	24	25	26	27	29	30	31	32	33	36	37	38	39
24	EDEXPECT	.94													
25	HOMEREAD	.31	.38												
26	TIMEREAD	.38	.42												
27	WRITEPAR			.22											
29	STUDYHAB	.51	.56	.36	.40	.27									
30	TIMEMATH														
31	TESTFREQ														
32	TESTRETN			.44											
33	CLDISCIP			.28			.40			.34					
36	MATHINST							.23							
37	ENGLINST											.23			
38	SCIINST											.27			
39	SOCINST											.34	.30		
44	INTSCHL				.25		.42			.28	.38				

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .21$)

TABLE A-9

1986 PENNSYLVANIA SCHOOL NORMS
GRADE 9 SCHOOLS
N = 144

PERCENTILE	Reading Comprehension	Writing Skills	Mathematics	Analytical Thinking	Social Studies	Arts & Humanities	Science & Technology	Environment	Self-Concept	Health Practices	PERCENTILE
95	35.63	47.89	40.95	21.84	44.00	33.42	24.92	24.84	64.29	97.62	95
90	35.37	47.13	40.22	21.64	42.94	33.09	24.41	24.41	63.06	96.51	90
85	35.04	46.81	39.60	21.31	42.39	32.81	24.26	24.07	62.25	95.76	85
80	34.65	46.17	38.61	21.02	41.92	32.04	23.76	23.48	61.86	94.71	80
75	34.27	45.91	38.04	20.64	41.01	31.77	23.28	23.35	61.62	94.22	75
70	34.02	45.22	37.59	20.43	40.57	31.36	22.87	23.08	61.16	93.70	70
65	33.76	44.98	37.38	20.27	40.30	31.02	22.58	22.92	60.81	93.29	65
60	33.44	44.71	36.97	20.15	39.90	30.68	22.25	22.70	60.63	92.81	60
55	33.12	44.53	36.63	19.94	39.54	30.29	22.05	22.38	60.44	92.27	55
50	32.79	44.37	36.23	19.69	39.12	30.00	21.78	22.02	60.17	91.78	50
45	32.48	44.24	35.97	19.43	38.83	29.70	21.66	21.83	59.95	90.83	45
40	32.05	44.04	35.61	19.26	38.40	29.45	21.55	21.69	59.70	90.41	40
35	31.50	43.84	35.22	19.15	38.03	29.08	21.30	21.48	59.41	90.06	35
30	31.10	43.31	34.81	18.95	37.76	28.74	21.00	21.38	59.24	89.54	30
25	30.85	42.93	34.37	18.86	37.22	28.49	20.84	21.15	58.80	88.88	25
20	30.55	42.52	33.79	18.52	36.99	27.97	20.44	20.85	58.57	88.39	20
15	29.74	42.03	33.31	18.22	36.03	27.52	20.09	19.80	58.11	87.74	15
10	29.04	41.26	32.18	17.33	34.70	26.49	19.54	19.26	57.61	87.32	10
5	27.82	40.27	30.58	16.81	32.95	25.36	18.00	19.00	56.99	85.54	5
Mean	32.36	44.19	36.10	19.57	38.96	29.90	21.84	22.03	60.25	91.64	Mean
Std Dev	2.83	2.77	3.28	1.79	3.65	2.70	2.21	1.98	2.08	3.75	Std Dev

TABLE B-9

1986 PERCENTILE DISTRIBUTION OF VARIABLES
GRADE 9 SCHOOLS
N = 144

PER-CEN-TILE	1 GRENROLL	2 PCTLI	3 TUITION	4 TSATPAR	5 TEDUC	8 CLSIZE	9 TOBSERVE	10 LEADER	11 TCHRINIT	PER-CEN-TILE
95	336	47.30	3591	2.31	2.14	25.76	2.97	27.33	28.53	95
90	310	43.10	3096	2.22	2.05	24.86	2.74	26.32	27.91	90
85	275	39.30	2985	2.17	2.03	24.52	2.59	25.92	27.67	85
80	267	35.10	2891	2.12	1.97	24.15	2.46	25.26	27.48	80
75	243	31.70	2876	2.09	1.94	23.91	2.34	24.73	27.31	75
70	227	29.30	2756	2.06	1.90	23.67	2.24	24.09	27.10	70
65	211	27.90	2650	2.03	1.86	23.37	2.16	23.56	26.88	65
60	196	26.10	2579	2.00	1.81	23.15	2.11	22.96	26.59	60
55	183	24.40	2484	2.00	1.76	22.94	2.02	22.29	26.33	55
50	170	22.00	2423	1.95	1.74	22.67	1.92	21.74	25.92	50
45	155	20.40	2401	1.89	1.72	22.50	1.82	21.21	25.68	45
40	142	17.30	2357	1.85	1.68	22.42	1.62	21.05	25.45	40
35	133	14.50	2310	1.82	1.65	22.25	1.47	20.71	25.32	35
30	123	12.70	2278	1.81	1.64	21.74	1.39	20.41	24.98	30
25	115	12.00	2228	1.77	1.60	21.32	1.31	20.22	24.75	25
20	102	8.50	2208	1.74	1.57	21.11	1.24	19.71	24.35	20
15	90	6.80	2132	1.67	1.52	20.73	1.17	18.17	23.93	15
10	84	4.80	2094	1.55	1.50	19.96	1.11	17.30	23.59	10
5	67	3.20	2002	1.45	1.42	18.59	1.00	16.53	23.05	5
Mean	187	22.68	2559	1.91	1.77	22.58	1.90	21.98	25.92	Mean
Std Dev	106	13.70	460	0.28	0.23	2.18	0.67	3.62	1.78	Std Dev

TABLE B-9 (Continued)
1986

PERCENTILE	12 DISRUPTN	13 DISCIPLN	14 PLANNING	15 SCHLCLIM	16 PCTGIRLS	17 PAREDUC	18 RESIDE	19 PCTWHITE	20 MOBILITY	21 SPARINT	22 TVWATCH	PERCENTILE
95	21.13	21.59	18.06	13.25	56.41	2.39	4.03	100.00	0.44	4.53	2.48	95
90	20.51	21.22	17.28	13.00	54.89	2.18	3.92	99.36	0.39	4.47	2.31	90
85	19.95	20.63	16.77	12.70	53.51	2.11	3.72	99.06	0.36	4.36	2.25	85
80	19.29	20.19	16.27	12.38	52.83	1.98	3.10	98.81	0.35	4.33	2.22	80
75	18.89	19.97	16.04	12.16	52.17	1.93	2.35	98.52	0.32	4.28	2.18	75
70	18.64	19.60	15.84	11.94	51.50	1.87	1.99	98.28	0.29	4.23	2.13	70
65	18.41	19.17	15.50	11.77	50.75	1.81	1.33	98.08	0.28	4.21	2.08	65
60	18.08	18.94	15.29	11.59	50.00	1.78	1.13	97.78	0.26	4.17	2.05	60
55	17.80	18.59	15.17	11.46	49.80	1.71	1.03	97.59	0.25	4.14	2.03	55
50	17.62	18.24	14.88	11.33	49.17	1.68	0.97	96.91	0.24	4.10	2.02	50
45	17.33	17.98	14.75	11.15	48.75	1.66	0.90	96.67	0.24	4.06	2.00	45
40	16.94	17.39	14.38	11.00	48.24	1.61	0.88	96.32	0.23	4.04	1.95	40
35	16.66	17.23	14.20	10.88	47.88	1.60	0.78	96.00	0.21	4.00	1.93	35
30	16.47	16.96	13.92	10.68	47.32	1.57	0.68	95.36	0.20	3.96	1.91	30
25	16.27	16.77	13.64	10.39	47.06	1.52	0.60	94.95	0.19	3.92	1.89	25
20	15.96	16.40	13.27	9.90	46.08	1.51	0.54	93.38	0.17	3.86	1.86	20
15	15.45	16.04	12.90	9.50	44.92	1.44	0.43	92.54	0.15	3.79	1.80	15
10	14.93	15.26	12.58	9.05	43.63	1.39	0.30	88.00	0.13	3.67	1.73	10
5	14.47	14.41	11.31	8.38	41.67	1.34	0.20	68.42	0.12	3.55	1.67	5
Mean	17.60	18.21	14.83	11.14	49.46	1.75	1.58	93.79	0.26	4.08	2.03	Mean
Std Dev	2.11	2.33	1.99	1.50	5.32	0.31	1.36	11.76	0.11	0.30	0.24	Std Dev

TABLE B-9 (Continued)
1986

PER-CEN-TILE	23 PAREXP	24 EDEXPECT	25 HOMEREAD	26 TIMEREAD	27 WRITEPAR	29 STUDYHAB	30 TIMEMATH	31 TESTFREQ	32 TESTRETN	33 CLDISCIP	PER-CEN-TILE
95	2.60	2.85	3.84	2.26	3.07	2.29	1.99	3.17	2.81	2.50	95
90	2.50	2.67	3.80	2.18	2.96	2.24	1.92	3.14	2.68	2.42	90
85	2.43	2.61	3.75	2.11	2.90	2.22	1.91	3.11	2.62	2.40	85
80	2.37	2.54	3.69	2.07	2.81	2.20	1.88	3.05	2.57	2.37	80
75	2.35	2.52	3.60	2.05	2.77	2.18	1.82	3.01	2.53	2.35	75
70	2.32	2.48	3.57	2.03	2.69	2.15	1.80	2.99	2.50	2.33	70
65	2.28	2.44	3.54	2.00	2.66	2.14	1.78	2.97	2.47	2.30	65
60	2.21	2.39	3.48	1.99	2.59	2.12	1.75	2.93	2.45	2.28	60
55	2.19	2.36	3.46	1.96	2.54	2.10	1.73	2.91	2.42	2.25	55
50	2.15	2.32	3.43	1.94	2.50	2.08	1.71	2.88	2.38	2.23	50
45	2.13	2.31	3.38	1.92	2.47	2.07	1.68	2.87	2.31	2.21	45
40	2.09	2.28	3.33	1.91	2.45	2.06	1.66	2.85	2.29	2.19	40
35	2.07	2.25	3.26	1.89	2.41	2.04	1.64	2.79	2.27	2.14	35
30	2.03	2.23	3.23	1.87	2.35	2.01	1.61	2.77	2.24	2.12	30
25	2.00	2.20	3.16	1.84	2.30	2.00	1.57	2.75	2.22	2.10	25
20	1.96	2.17	3.12	1.82	2.26	1.96	1.54	2.73	2.16	2.07	20
15	1.92	2.13	3.01	1.79	2.23	1.94	1.50	2.69	2.11	2.01	15
10	1.89	2.08	2.91	1.73	2.18	1.89	1.43	2.62	2.10	1.96	10
5	1.80	1.97	2.75	1.64	2.07	1.85	1.34	2.58	2.04	1.82	5
Mean	2.17	2.35	3.38	1.95	2.54	2.08	1.70	2.88	2.38	2.21	Mean
Std Dev	0.26	0.25	0.35	0.19	0.30	0.14	0.19	0.23	0.25	0.19	Std Dev

TABLE B-9 (Continued)
1986

PER-CEN-TILE	36 MATHINST	37 ENGLINST	38 SCIINST	39 SOCINST	44 INTSCHL	PER-CEN-TILE
95	4.83	5.09	5.55	5.82	52.23	95
90	4.60	4.93	5.45	5.68	51.03	90
85	4.55	4.83	5.33	5.52	50.56	85
80	4.51	4.78	5.27	5.39	49.77	80
75	4.46	4.69	5.20	5.35	49.46	75
70	4.43	4.64	5.15	5.27	49.09	70
65	4.39	4.57	5.10	5.24	48.76	65
60	4.36	4.54	5.00	5.19	48.59	60
55	4.35	4.48	4.95	5.14	48.48	55
50	4.30	4.44	4.89	5.09	48.15	50
45	4.26	4.39	4.84	5.06	47.76	45
40	4.22	4.33	4.79	5.03	47.36	40
35	4.17	4.29	4.74	5.00	46.81	35
30	4.12	4.26	4.71	4.92	46.27	30
25	4.08	4.18	4.65	4.85	45.90	25
20	4.05	4.14	4.58	4.78	45.52	20
15	4.00	4.08	4.41	4.71	45.35	15
10	3.88	3.96	4.34	4.55	44.90	10
5	3.81	3.77	4.14	4.38	43.94	5
Mean	4.28	4.44	4.90	5.10	47.84	Mean
Std Dev	0.31	0.41	0.46	0.44	2.53	Std Dev

TABLE C-9

CORRELATION COEFFICIENTS AMONG SCHOOL SCORES
Grade 9
1986 Normative Group
N = 144

		RC	WS	M	AT	SS	AH	ST	EN	SC
Communication Skills: Reading Comprehension	RC									
Communication Skills: Writing Skills	WS	.86								
Mathematics	M	.79	.85							
Analytical Thinking	AT	.90	.85	.77						
Citizenship/Social Studies	SS	.86	.84	.77	.88					
Arts & Humanities	AH	.79	.83	.83	.78	.76				
Science & Technology	ST	.87	.85	.81	.87	.87	.81			
Environment	EN	.77	.77	.74	.79	.78	.77	.87		
Self-Concept in School	SC	.38	.35	.22	.38	.34	.24	.24	.17	
Health & Safety Practices	HP	.35	.23	.07	.36	.30	.06	.20	.14	.57

Note: All correlation coefficients have been rounded to two decimal places.

$r \geq 0.16$ is significant at the .05 level.
$r \geq 0.22$ is significant at the .01 level.

TABLE D-9

CORRELATION COEFFICIENTS BETWEEN
SCHOOL CONDITION VARIABLE SCORES AND SCHOOL SCORES
Grade 9
1986 Normative Group
N = 144

		RC	WS	M	AT	SS	AH	ST	EN	SC	HP*	
1	GRENROLL											1
2	PCTLI	-.23	-.34	-.45	-.24	-.25	-.53	-.35	-.40		.28	2
3	TUITION										-.25	3
4	TSATPAR	.45	.55	.53	.48	.41	.60	.52	.46			4
5	TEDUC						.23					5
8	CLSIZE											8
9	TOBSERVE						.27					9
10	LEADER											10
11	TCHRINIT	.22	.26	.28		.25	.27	.23				11
12	DISRUPTN	.34	.39	.39	.37	.39	.32	.40	.32			12
13	DISCIPLN	.26	.29	.36	.28	.31	.28	.34	.31			13
14	PLANNING						.23					14
15	SCHLCLIM		.24	.33		.24	.29	.34	.33			15
16	PCTGIRLS										.24	16
17	PAREDUC	.30	.45	.48	.30	.32	.59	.33	.30		-.27	17
18	RESIDE	-.24				-.22		-.31	-.35			18
19	PCTWHITE	.55	.51	.54	.54	.56	.47	.60	.55			19
20	MOBILITY	-.47	-.45	-.34	-.52	-.49	-.26	-.48	-.41		-.31	20
21	SPARINT	.37	.44	.43	.38	.39	.42	.33	.22	.47		21
22	TVWATCH	-.43	-.46	-.50	-.40	-.38	-.44	-.48	-.42			22
23	PAREXP	.32	.46	.39	.30	.34	.50	.26		.28		23
24	EDEXPECT	.37	.50	.45	.35	.38	.59	.34	.26	.32		24
25	HOMEREAD	.47	.52	.60	.43	.43	.61	.57	.60		-.22	25
26	TIMEREAD										.22	26
27	WRITEPAR											27
29	STUDYHAB	.25	.32	.22	.26	.29	.23			.59	.37	29
30	TIMEMATH										.25	30
31	TESTFREQ		.22									31
32	TESTRETN	.32	.35	.37	.33	.31	.22	.30	.33			32
33	CLDISCIP	.36	.31	.33	.41	.39	.26	.30	.28	.40	.31	33
36	MATHINST											36
37	ENGLINST											37
38	SCIINST		.28	.22		.22	.32	.25	.29			38
39	SOCINST	.29	.37	.34	.31	.36	.29	.32	.31			39
44	INTSCHL	.27			.22	.22				.67	.54	44

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .22$).

*See Table C-9 as key to area identification.

TABLE E-9
CORRELATION COEFFICIENTS AMONG
SCHOOL CONDITION VARIABLE SCORES
Grade 9, 1986 Normative Group, N = 144

		1	2	3	4	5	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	GRENROLL																				
2	PCTLI	-.24																			
3	TUITION		-.34																		
4	TSATPAR		-.44																		
5	TEDUC	.30	-.38	.53																	
8	CLSIZE	.41																			
9	TOBSERVE		-.22		.28																
10	LEADER		-.24		.31																
11	TCHRINIT				.52				.43												
12	DISRUPTN				.48				.56	.57											
13	DISCIPLN				.52			.24	.60	.55	.71										
14	PLANNING		-.42		.47			.26	.56	.40	.40	.41									
15	SCHLCLIM		-.27		.45				.49	.44	.58	.59	.52								
16	PCTGIRLS		.24																		
17	PAREDUC	.41	-.56	.52	.54	.45			.25	.35			.32								
18	RESIDE	.50		.61		.44						-.24				.44					
19	PCTWHITE			-.38	.37					.26	.41	.39		.24			-.50				
20	MOBILITY	.27		.49	-.27	.35					-.31	-.23					.51	-.55			
21	SPARINT	.32	-.30		.34	.23			.24	.29	.36	.25	.23	.25		.44	.28				
22	TVWATCH		.37		-.43					-.33	-.43	-.31	-.23	-.26		-.26		-.42		-.28	
23	PAREXP	.35	-.24	.42	.37	.33	.25			.23						.82	.46			.37	
24	EDEXPECT	.34	-.30	.42	.41	.34	.23			.27						.84	.42			.42	
25	HOMEREAD		-.46		.61			.29		.27	.29	.37	.33	.43		.54	-.22	.40		.22	-.44
26	TIMEREAD						-.23								.30						
27	WRITEPAR		-.22	.27															.25		
29	STUDYHAB						.26													.36	
30	TIMEMATH																				
31	TESTFREQ				.25																
32	TESTRETN				.32					.25	.38	.32					-.29	.35	-.32	.27	-.32
33	CLDISCIP																	.27		.45	-.28
36	MATHINST																				
37	ENGLINST																				
38	SCIINST		-.28																		
39	SOCINST																				-.27
44	INTSCH																			.47	

		23	24	25	26	27	29	30	31	32	33	36	37	38	39
24	EDEXPECT	.95													
25	HOMEREAD	.27	.39												
26	TIMEREAD														
27	WRITEPAR														
29	STUDYHAB	.35	.38												
30	TIMEMATH														
31	TESTFREQ														
32	TESTRETN			.23											
33	CLDISCIP						.36			.33					
36	MATHINST														
37	ENGLINST														
38	SCIINST											.23			
39	SOCINST			.26									.26		
44	INTSCHL						.38			.31	.52				

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .22$)

TABLE A-11

1986 PENNSYLVANIA SCHOOL NORMS
GRADE 11 SCHOOLS
N = 121

PERCENTILE	Reading Comprehension	Writing Skills	Mathematics	Analytical Thinking	Social Studies	Arts & Humanities	Science & Technology	Environment	Self-Concept	Health Practices	PERCENTILE
95	33.60	42.45	40.29	20.41	38.97	30.15	24.60	24.52	64.54	111.49	95
90	32.79	41.58	39.11	20.10	38.48	29.77	24.27	24.37	63.60	109.28	90
85	32.59	41.03	38.32	19.76	37.80	29.08	24.00	23.88	62.99	108.21	85
80	32.24	40.52	37.95	19.61	37.44	28.80	23.69	23.51	62.82	107.56	80
75	32.00	40.38	37.56	19.45	37.15	28.42	23.47	23.37	62.48	106.77	75
70	31.80	40.09	37.29	19.34	36.94	28.12	23.38	23.16	62.09	106.10	70
65	31.57	39.85	36.58	19.14	36.54	27.70	23.11	22.96	61.87	105.63	65
60	31.16	39.58	36.30	18.79	36.24	27.43	22.81	22.77	61.69	104.96	60
55	30.67	39.36	36.03	18.61	35.89	27.18	22.72	22.53	61.40	104.59	55
50	30.25	39.17	35.89	18.42	35.29	26.86	22.29	22.39	61.10	104.14	50
45	30.03	39.03	35.69	18.28	35.09	26.60	21.95	22.15	60.70	103.72	45
40	29.83	38.77	35.19	18.12	34.88	26.37	21.86	21.95	60.32	103.42	40
35	29.59	38.45	34.83	17.91	34.64	25.86	21.69	21.74	60.18	102.68	35
30	29.11	38.29	34.39	17.71	34.00	25.32	21.48	21.44	59.89	101.95	30
25	28.86	37.98	33.86	17.47	33.17	25.09	21.11	21.15	59.36	101.42	25
20	28.46	37.15	33.43	17.08	32.53	24.44	20.80	20.77	59.11	100.51	20
15	27.78	36.71	32.61	16.78	31.92	24.22	20.27	20.34	58.89	99.83	15
10	26.79	35.76	32.15	16.00	31.37	23.51	19.71	19.76	58.48	99.17	10
5	26.16	35.29	31.69	15.14	30.78	22.91	18.29	19.53	58.02	98.70	5
Mean	30.22	39.00	35.66	18.28	35.19	26.74	22.13	22.19	61.08	104.35	Mean
Std Dev	2.54	2.33	2.90	1.68	2.92	2.52	2.05	1.84	2.18	4.13	Std Dev

TABLE B-11

1986 PERCENTILE DISTRIBUTION OF VARIABLES
GRADE 11 SCHOOLS
N = 121

PER-CEN-TILE	1 GRENROLL	2 PCTLI	3 TUITION	4 TSATPAR	5 TEDUC	8 CLSIZE	9 TOBSERVE	10 LEADER	11 TCHRINIT	PER-CEN-TILE
95	331	47.30	3491	2.40	2.11	25.31	2.86	27.33	28.46	95
90	272	40.60	3137	2.27	2.08	24.37	2.70	26.09	27.85	90
85	260	36.80	3054	2.20	2.02	23.93	2.57	25.36	27.73	85
80	247	32.30	2912	2.17	1.96	23.47	2.46	24.62	27.36	80
75	222	29.80	2818	2.14	1.91	23.30	2.31	24.20	27.10	75
70	204	28.30	2731	2.09	1.87	23.14	2.21	23.74	26.70	70
65	190	26.50	2597	2.05	1.82	22.93	2.14	23.32	26.52	65
60	171	24.40	2525	2.02	1.78	22.67	2.06	22.93	26.08	60
55	158	22.10	2461	2.00	1.74	22.58	2.03	22.39	25.92	55
50	151	20.30	2422	2.00	1.72	22.50	2.00	21.94	25.73	50
45	137	17.50	2393	1.97	1.69	22.34	1.92	21.53	25.48	45
40	128	15.90	2357	1.90	1.66	22.07	1.86	21.21	25.29	40
35	117	14.30	2303	1.86	1.64	21.91	1.78	21.14	25.09	35
30	110	12.00	2254	1.83	1.62	21.82	1.56	20.64	24.81	30
25	99	10.10	2226	1.82	1.59	21.27	1.47	20.22	24.49	25
20	92	7.40	2185	1.73	1.52	20.93	1.35	19.07	24.10	20
15	78	6.40	2135	1.68	1.50	20.71	1.27	17.92	23.75	15
10	61	5.30	2092	1.59	1.45	19.61	1.16	17.14	23.37	10
5	51	4.50	2020	1.51	1.40	18.36	1.06	16.12	22.45	5
Mean	166	21.80	2563	1.96	1.75	22.24	1.94	21.80	25.69	Mean
Std Dev	92	14.48	494	0.26	0.23	2.00	0.61	3.61	1.83	Std Dev

TABLE B-11 (Continued)
1986

PER-CEN-TILE	12 DISRUPTN	13 DISCIPLN	14 PLANNING	15 SCHLCLIM	16 PCTGIRLS	17 PAREDUC	18 RESIDE	19 PCTWHITE	20 MOBILITY	21 SPARINT	22 TVWATCH	PER-CEN-TILE
95	21.06	22.23	18.03	13.52	57.61	2.45	4.23	100.00	0.35	4.54	2.09	95
90	20.29	21.29	17.70	13.15	55.76	2.26	3.97	99.21	0.28	4.43	1.96	90
85	19.16	20.90	17.20	12.96	55.00	2.18	3.43	98.90	0.25	4.27	1.87	85
80	18.86	20.35	16.70	12.76	54.10	2.03	3.09	98.57	0.24	4.25	1.81	80
75	18.50	20.04	16.23	12.28	53.21	1.99	2.16	98.29	0.23	4.21	1.76	75
70	18.27	19.74	16.08	12.15	52.86	1.92	2.02	98.07	0.21	4.15	1.74	70
65	17.95	19.44	15.95	12.00	52.14	1.87	1.45	97.58	0.20	4.12	1.71	65
60	17.71	19.20	15.68	11.73	51.39	1.84	1.37	97.17	0.19	4.10	1.68	60
55	17.52	19.12	15.33	11.62	50.77	1.78	1.12	97.04	0.18	4.06	1.64	55
50	17.31	18.86	15.09	11.46	50.29	1.74	1.00	96.13	0.18	4.03	1.62	50
45	17.27	18.26	14.93	11.33	49.39	1.71	0.96	95.65	0.17	4.01	1.59	45
40	16.92	18.05	14.75	11.12	49.09	1.67	0.88	95.33	0.16	3.99	1.56	40
35	16.66	17.41	14.57	10.91	48.82	1.64	0.78	94.69	0.14	3.96	1.54	35
30	16.43	17.23	14.26	10.77	48.15	1.61	0.71	94.23	0.13	3.92	1.48	30
25	16.16	16.77	14.14	10.55	47.12	1.57	0.62	94.02	0.12	3.88	1.45	25
20	15.83	16.25	13.98	10.41	46.60	1.54	0.51	92.92	0.11	3.84	1.43	20
15	15.45	15.90	13.17	10.14	45.64	1.50	0.40	91.89	0.10	3.80	1.38	15
10	14.93	14.84	12.89	9.79	44.70	1.43	0.33	87.68	0.09	3.70	1.31	10
5	14.22	14.00	12.21	8.63	42.86	1.30	0.19	70.41	0.06	3.55	1.23	5
Mean	17.45	18.39	15.14	11.38	50.16	1.80	1.60	93.12	0.18	4.04	1.63	Mean
Std Dev	2.18	2.48	2.04	1.44	4.45	0.36	1.36	12.16	0.08	0.29	0.25	Std Dev

TABLE B-11 (Continued)
1986

PERCENTILE	23 PAREXP	24 EDEXPECT	25 HOMEREAD	26 TIMEREAD	27 WRITEPAR	29 STUDYHAB	30 TIMEMATH	31 TESTFREQ	32 TESTRETN	33 CLDISCIP	PERCENTILE
95	2.65	2.84	3.97	2.27	3.09	2.20	1.97	3.19	2.81	2.60	95
90	2.55	2.74	3.92	2.18	2.99	2.15	1.86	3.06	2.75	2.53	90
85	2.47	2.70	3.87	2.15	2.95	2.14	1.84	3.04	2.72	2.51	85
80	2.44	2.61	3.77	2.12	2.90	2.10	1.77	3.02	2.65	2.48	80
75	2.39	2.58	3.70	2.10	2.84	2.08	1.74	3.00	2.60	2.46	75
70	2.35	2.54	3.66	2.10	2.82	2.07	1.69	2.98	2.59	2.45	70
65	2.32	2.47	3.58	2.06	2.78	2.06	1.67	2.95	2.52	2.43	65
60	2.27	2.42	3.50	2.01	2.75	2.04	1.63	2.93	2.49	2.40	60
55	2.22	2.39	3.47	1.99	2.71	2.03	1.61	2.89	2.45	2.38	55
50	2.21	2.38	3.44	1.97	2.68	2.00	1.57	2.86	2.42	2.37	50
45	2.18	2.35	3.41	1.95	2.62	1.99	1.52	2.83	2.39	2.34	45
40	2.15	2.34	3.38	1.91	2.60	1.98	1.50	2.80	2.35	2.33	40
35	2.11	2.32	3.32	1.90	2.53	1.96	1.48	2.79	2.30	2.31	35
30	2.08	2.29	3.28	1.88	2.52	1.95	1.44	2.78	2.27	2.30	30
25	2.06	2.24	3.22	1.84	2.44	1.93	1.42	2.74	2.26	2.28	25
20	2.02	2.21	3.16	1.81	2.41	1.90	1.37	2.69	2.21	2.25	20
15	1.97	2.18	3.07	1.80	2.36	1.88	1.33	2.67	2.15	2.20	15
10	1.88	2.09	3.03	1.72	2.27	1.85	1.30	2.58	2.08	2.16	10
5	1.78	2.01	2.91	1.65	2.10	1.79	1.16	2.49	1.99	2.03	5
Mean	2.22	2.40	3.46	1.97	2.65	2.01	1.57	2.86	2.42	2.35	Mean
Std Dev	0.26	0.26	0.35	0.19	0.29	0.13	0.24	0.2?	0.26	0.18	Std Dev

TABLE B-11 (Continued)
1986

PER-CEN-TILE	34 PCTACAD	35 HRSWORK	36 MATHINST	37 ENGLINST	38 SCIINST	39 SOCINST	40 PCTMATH	42 PCTSCI	44 INTSCHL	PER-CEN-TILE
95	69.09	1.69	5.19	5.60	5.81	6.11	98.92	98.05	53.83	95
90	67.10	1.62	4.91	5.43	5.68	5.98	98.44	93.55	53.18	90
85	65.10	1.55	4.86	5.32	5.60	5.83	97.86	89.00	51.68	85
80	59.42	1.43	4.77	5.14	5.55	5.73	96.77	84.69	51.17	80
75	57.14	1.40	4.73	5.08	5.45	5.71	95.65	79.51	50.39	75
70	54.87	1.30	4.67	5.02	5.39	5.68	94.30	76.10	50.02	70
65	52.71	1.26	4.64	4.98	5.35	5.62	93.33	74.07	49.65	65
60	51.70	1.23	4.62	4.90	5.31	5.59	92.41	73.05	49.34	60
55	50.47	1.19	4.60	4.82	5.27	5.53	90.37	69.31	48.89	55
50	49.09	1.15	4.56	4.77	5.23	5.52	90.00	66.67	48.61	50
45	47.83	1.12	4.53	4.73	5.19	5.46	88.15	63.12	48.17	45
40	47.25	1.10	4.46	4.69	5.13	5.37	86.59	62.35	47.73	40
35	44.70	1.07	4.40	4.65	5.08	5.33	84.38	61.38	47.49	35
30	42.28	1.02	4.36	4.61	5.03	5.30	82.13	59.40	47.05	30
25	40.74	0.99	4.29	4.50	4.95	5.18	79.89	58.50	46.65	25
20	38.65	0.95	4.24	4.39	4.86	5.10	78.13	56.65	46.04	20
15	36.72	0.93	4.20	4.29	4.78	4.92	77.46	54.00	45.41	15
10	34.21	0.82	4.12	4.21	4.65	4.67	74.83	51.52	44.87	10
5	30.51	0.68	4.00	3.98	4.42	4.43	71.57	48.04	43.73	5
Mean	49.70	1.19	4.54	4.78	5.19	5.39	87.39	69.37	48.75	Mean
Std Dev	12.25	0.30	0.35	0.51	0.43	0.56	10.03	15.27	3.55	Std Dev

TABLE C-11

CORRELATION COEFFICIENTS AMONG SCHOOL SCORES
Grade 11
1986 Normative Group
N = 121

		RC	WS	M	AT	SS	AH	ST	EN	SC
Communication Skills: Reading Comprehension	RC									
Communication Skills: Writing Skills	WS	.82								
Mathematics	M	.78	.76							
Analytical Thinking	AT	.88	.78	.79						
Citizenship/Social Studies	SS	.78	.74	.74	.79					
Arts & Humanities	AH	.76	.76	.74	.78	.73				
Science & Technology	ST	.83	.76	.82	.82	.74	.68			
Environment	EN	.78	.72	.80	.76	.75	.71	.84		
Self-Concept in School	SC	.33	.36	.32	.33	.39	.29	.23	.21	
Health & Safety Practices	HP	.09	-.09	.01	.07	.04	-.17	.12	-.02	.40

Note: All correlation coefficients have been rounded to two decimal places.

$r \geq 0.20$ is significant at the .05 level.
$r \geq 0.23$ is significant at the .01 level.

TABLE D-11

CORRELATION COEFFICIENTS BETWEEN
SCHOOL CONDITION VARIABLE SCORES AND SCHOOL SCORES
Grade 11
1986 Normative Group
N = 121

		RC	WS	M	AT	SS	AH	ST	EN	SC	HP*	
1	GRENROLL											1
2	PCTLI	-.38	-.47	-.54	-.49	-.42	-.63	-.38	-.49		.36	2
3	TUITION						.27					3
4	TSATPAR	.51	.54	.64	.53	.51	.52	.55	.56	.31		4
5	TEDUC						.27				-.27	5
8	CLSIZE										-.29	8
9	TOBSERVE						.24					9
10	LEADER			.28	.24			.25	.24			10
11	TCHRINIT	.27	.39	.43	.29	.35	.32	.32	.33	.32		11
12	DISRUPTN	.33	.39	.49	.31	.35	.24	.37	.35			12
13	DISCIPLN	.37	.45	.49	.42	.38	.37	.43	.35			13
14	PLANNING		.24	.33	.28	.25	.31	.28	.35			14
15	SCHLCLIM	.26	.30	.39	.33	.30	.30	.33	.27			15
16	PCTGIRLS											16
17	PAREDUC	.29	.47	.40	.37	.40	.62	.28	.32		-.35	17
18	RESIDE							-.32	-.28			18
19	PCTWHITE	.50	.50	.52	.47	.43	.31	.60	.54			19
20	MOBILITY	-.30	-.26			-.24		-.28	-.26			20
21	SPARINT	.37	.43	.44	.38	.46	.34	.32	.29	.49	.25	21
22	TVWATCH	-.55	-.56	-.63	-.58	-.54	-.59	-.63	-.59			22
23	PAREXP		.37	.23	.23	.32	.46			.29	-.25	23
24	EDEXPECT		.44	.30	.31	.38	.53			.37	-.24	24
25	HOMEREAD	.39	.51	.52	.41	.41	.57	.50	.53			25
26	TIMEREAD									.40	.45	26
27	WRITEPAR											27
29	STUDYHAB									.51	.26	29
30	TIMEMATH											30
31	TESTFREQ										.39	31
32	TESTRETN	.29	.25	.28		.24		.31				32
33	CLDISCIP	.46	.46	.51	.43	.49	.36	.52	.39	.33		33
34	PCTACAD		.43	.30	.25	.32	.49		.24		-.29	34
35	HRSWORK						.34		.29		-.31	35
36	MATHINST											36
37	ENGLINST											37
38	SCIINST											38
39	SOCINST										-.24	39
44	INTSCHL					.27				.61	.48	44

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .23$).

*See Table C-11 as key to area identification.

TABLE E-11
CORRELATION COEFFICIENTS AMONG
SCHOOL CONDITION VARIABLE SCORES
Grade 11, 1986 Normative Group, N = 121

		1	2	3	4	5	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	GRENROLL																						
2	PCTLI	-.37																					
3	TUITION																						
4	TSATPAR		-.47																				
5	TEDUC	.42	-.36	.37																			
8	CLSIZE	.44																					
9	TOBSERVE					.26																	
10	LEADER				.43		-.27																
11	TCHRINIT		-.34		.68				.39														
12	DISRUPTN				.63		-.33		.55	.58													
13	DISCIPLN		-.35		.71				.62	.69	.77												
14	PLANNING		-.31		.57			.25	.62	.50	.47	.50											
15	SCHLCLIM		-.32		.59				.51	.59	.59	.72	.65										
16	PCTGIRLS																						
17	PAREDUC	.38	-.55	.44	.44	.48		.25		.35		.26		.29									
18	RESIDE	.50		.49		.45					-.27					.34							
19	PCTWHITE			-.42	.35						.35	.37					-.48						
20	MOBILITY	.38		.30							-.25					.37	.28	-.50					
21	SPARINT				.50		-.28		.27	.49	.53	.41	.31	.42									
22	TVMATCH		.54		-.46					-.27		-.29	-.26	-.24		-.39		-.43					
23	PAREXP	.31	-.31	.48	.26	.43				.29						.80	.46			.29			
24	EDEXPECT	.35	-.39	.47	.31	.46				.33						.84	.46		.24	.31		.96	
25	HOMEREAD		-.48		.54					.34	.25	.32	.32	.32		.61		.27			-.57	.32	.38
26	TIMEREAD		.30																	.26			.24
27	WRITEPAR				.23				.24				.29										
29	STUDYHAB				.23					.24										.41		.25	.30
30	TIMEMATH																					.28	.25
31	TESTFREQ	.23					-.30																
32	TESTRETN										.30							.30	-.25	.39			
33	CLDISCIP		-.31		.46					.32	.40	.47	.25	.39				.41	-.26	.48	-.46		
34	PCTACAD	.29	-.44	.26	.29	.30				.30						.71	.25			.26		.76	.77
35	HRSWORK	.35	-.58			.37										.25			.31		-.40		
36	MATHINST						.26								-.26	.44	.25					.44	.46
37	ENGLINST									.23						.34			.26			.24	.28
38	SCIINST																						
39	SOCINST															.36						.34	.37
44	INTSCH				.32		-.36			.41	.44	.32		.32						.72			

		25	26	27	29	30	31	32	33	34	35	36	37	38	39	44
26	TIMEREAD															
27	WRITEPAR	.31														
29	STUDYHAB		.43													
30	TIMEMATH		.34		.26											
31	TESTFREQ															
32	TESTRETN															
33	CLDISCIP				.31			.39								
34	PCTACAD	.42														
35	HRSWORK	.24	-.39	.25		-.25	-.26									
36	MATHINST									.43						
37	ENGLINST									.27		.45				
38	SCIINST											.27				
39	SOCINST									.37		.29				
44	INTSCHL		.42		.41		.26	.40	.46							

Note: All correlation coefficients have been rounded to two decimal places.
Only correlation coefficients which are significant at the .01 level or better are printed ($r \geq .23$)

NORMATIVE SAMPLE

It is generally assumed that when a large sample of schools from across the state is assessed, the sample should be representative of the state as a whole. However, since the Educational Quality Assessment program was completely voluntary this year, it was important to select a sample which is proportionally representative of the state. TABLE F shows how this was accomplished. First, for each school in the state the size of the grade of interest and the percent of low income students was obtained from state records. The range of grade enrollments (GRENROLL) and the range of percent of low income students (PCTLI) were each divided so that one-third of the schools would be in each of three levels. By combining these levels, each school in the state was classified into one of nine cells. It was found that the number of schools involved in the assessment for some of the cells was disproportional. Therefore, a percentage of the schools (over 20 percent) available in the cell were randomly selected to represent the cell. In a few cells across the grade levels, there were not sufficient schools available and the entire group was selected. The percentage drops to 17 percent in one case as shown on the Grade 11 portion of TABLE F.

Because the main unit of analysis is the school, the above sample is used to develop school norms for analyses. However, because many districts have multiple elementary schools, the program also offers reports that summarize elementary results for school districts. To properly do this, a school sample is not appropriate; the sampling procedure was repeated to obtain a proportionally representative sample of districts. Size was based on district enrollments recorded in Department files, and wealth was based on market value/personal income aid ratio. Separate samples were selected from districts participating at Grade four and at Grade six. TABLE G shows that a 20 percent sample was obtained for all but one cell.

TABLE F-4

Description of Normative Sample of Schools with Grade 4

			Number of Schools		
Cell	GRENROLL	PCTLI	In State*	In Assessment	In Sample
1-1	Low thru 42	Low thru 16.78	224	39	39 (17%)
1-2	Low thru 42	16.78 thru 32.90	281	85	56 (20%)
1-3	Low thru 42	32.90 thru high	232	88	46 (20%)
2-1	42 thru 64	Low thru 16.78	242	42	42 (17%)
2-2	42 thru 64	16.78 thru 32.90	188	56	37 (20%)
2-3	42 thru 64	32.90 thru high	203	53	41 (20%)
3-1	64 thru high	Low thru 16.78	195	56	39 (20%)
3-2	64 thru high	16.78 thru 32.90	194	62	39 (20%)
3-3	64 thru high	32.90 thru high	225	50	45 (20%)
Totals			1984	531	384 (19%)

TABLE F-6

Description of Normative Sample of Schools with Grade 6

Cell	GRENROLL	PCTLI	Number of Schools		
			In State*	In Assessment	In Sample
1-1	Low thru 48	Low thru 18.28	137	41	34 (25%)
1-2	Low thru 48	18.28 thru 33.83	199	72	49 (25%)
1-3	Low thru 48	33.83 thru high	167	64	41 (24%)
2-1	48 thru 80	Low thru 18.28	160	42	39 (24%)
2-2	48 thru 80	18.28 thru 33.83	140	40	34 (24%)
2-3	48 thru 80	33.83 thru high	152	47	37 (24%)
3-1	80 thru high	Low thru 18.28	180	43	43 (24%)
3-2	80 thru high	18.28 thru 33.83	138	45	34 (24%)
3-3	80 thru high	33.83 thru high	157	41	38 (24%)
Totals			1430	435	349 (24%)

TABLE F-7

Description of Normative Sample of Schools with Grade 7

Cell	GRENROLL	PCTLI	Number of Schools		
			In State*	In Assessment	In Sample
1-1	Low thru 125	Low thru 17.51	51	14	11 (21%)
1-2	Low thru 125	17.51 thru 32.19	97	33	20 (21%)
1-3	Low thru 125	32.19 thru high	103	36	22 (21%)
2-1	125 thru 209	Low thru 17.51	92	21	19 (21%)
2-2	125 thru 209	17.51 thru 32.19	90	26	19 (21%)
2-3	125 thru 209	32.19 thru high	68	20	14 (21%)
3-1	209 thru high	Low thru 17.51	107	26	22 (21%)
3-2	209 thru high	17.51 thru 32.19	63	25	13 (21%)
3-3	209 thru high	32.19 thru high	78	16	16 (21%)
Totals			749	217	156 (21%)

TABLE F-9

Description of Normative Sample of Schools with Grade 9

Cell	GRENROLL	PCTLI	Number of Schools		
			In State*	In Assessment	In Sample
1-1	Low thru 144	Low thru 14.38	37	13	8 (21%)
1-2	Low thru 144	14.38 thru 28.57	81	30	17 (21%)
1-3	Low thru 144	28.57 thru high	109	39	23 (21%)
2-1	144 thru 248	Low thru 14.38	79	23	17 (21%)
2-2	144 thru 248	14.38 thru 28.57	84	24	18 (21%)
2-3	144 thru 248	28.57 thru high	65	26	14 (21%)
3-1	248 thru high	Low thru 14.38	114	34	24 (21%)
3-2	248 thru high	14.38 thru 28.57	62	22	13 (21%)
3-3	248 thru high	28.57 thru high	54	10	10 (19%)
Totals			685	221	144 (21%)

TABLE F-11

Description of Normative Sample of Schools with Grade 11

Cell	GRENROLL	PCTLI	Number of Schools		
			In State*	In Assessment	In Sample
1-1	Low thru 135	Low thru 12.60	31	9	6 (20%)
1-2	Low thru 135	12.60 thru 27.07	65	33	13 (20%)
1-3	Low thru 135	27.07 thru high	108	44	22 (20%)
2-1	135 thru 242	Low thru 12.60	70	22	14 (20%)
2-2	135 thru 242	12.60 thru 27.07	82	27	16 (20%)
2-3	135 thru 242	27.07 thru high	52	23	10 (20%)
3-1	242 thru high	Low thru 12.60	102	41	20 (20%)
3-2	242 thru high	12.60 thru 27.07	59	24	12 (20%)
3-3	242 thru high	27.07 thru high	46	8	8 (17%)
Totals			615	231	121 (20%)

*NOTE: The number of school buildings in the state housing a particular grade level is difficult to determine because of the local flexibility to restructure or close buildings. These estimates are based on the data available from Department records.

TABLE G

Description of Normative Sample of Districts - Grades 4 and 6

Cell	District Enrollment	Aid Ratio	Number of Districts In State*	In Assessment Fourth	In Assessment Sixth	In Sample Each Grade
1-1	Low thru 1817	Low thru .5007	35	12	12	7 (20%)
1-2	Low thru 1817	.5007 thru .6405	50	26	26	10 (20%)
1-3	Low thru 1817	.6405 thru high	82	29	33	16 (20%)
2-1	1817 thru 3008	Low thru .5007	53	10	10	10 (19%)
2-2	1817 thru 3008	.5007 thru .6405	61	20	20	12 (20%)
2-3	1817 thru 3008	.6405 thru high	53	21	20	11 (20%)
3-1	3008 thru high	Low thru .5007	79	22	21	16 (20%)
3-2	3008 thru high	.5007 thru .6405	57	21	21	11 (20%)
3-3	3008 thru high	.6405 thru high	31	15	16	6 (20%)
Totals			501	176	179	99 (20%)

COMPARABILITY OF TEST FORMS

A statistical definition of equivalence is employed in evaluating the comparability of EQA test forms. Therefore, to be statistically equivalent, the test forms should be similar in terms of mean score, variability and internal consistency. High statistical equivalence is desirable in that its presence leads to reduced error in the matrix sampling estimate of school building mean scores.

During the 1986 assessment, approximately 28,000 to 39,000 students were assessed at each grade level. Therefore, each of the three forms at grades four and six were responded to by 9,000 to 10,000 students; at grades 7, 9 and 11, each of the four forms were responded to by 8,000 to 10,000 students. From an item analysis, statistics were compiled which compare the forms with respect to mean score, variability and internal consistency. These results, shown in TABLES H-4 to H-11 indicate that overall there is very close comparability of forms. This may be observed through the very close values in the means, standard deviations and reliability coefficients.

Differences between form means were evaluated by computing an effect-size index rather than employing a significance test since virtually all differences can be found to be statistically significant when samples are extremely large. The index for effect size (Cohen, 1969*) is a ratio found by dividing the observed difference between means by the common standard deviation. The differences are thus converted into standard deviation units. Differences of a quarter of a standard deviation (0.25 or less) were regarded as being of minimal consequence. At Grade 4, with three forms, 11 of the 33 possible comparisons exceeded the .25 figure; 19 values ranged from .00 to .15. The largest deviation occurred for Science and Technology, where Forms B and C differed by .59 of a standard deviation. At Grade 6, with three forms, only 2 of the 33 possible comparisons exceeded the .25 figure; two thirds of the values ranged from .00 to .15. The largest deviation occurred for Science and Technology, where Forms B and C differed by .34 of a standard deviation. At Grade 7, with four forms, 7 of the 60 possible combinations exceeded the .25 figure; three fourths of the comparisons ranged from .00 to .15. The largest deviation occurred for Writing Skills, where the difference between forms B and D was .35 of a standard deviation. At Grade 9, with four forms, 4 of the 60 possible combinations exceeded the .25 figure; two thirds of the comparisons ranged from .00 to .15. The largest deviation occurred for Health Practices, where the difference between forms A and B was .35 of a standard deviation. At Grade 11, with four forms, none of the 60 possible combinations exceeded the .25 figure; over three fourths of the indices ranged from .00 to .15. The largest deviation occurred for several test areas where the difference reached .22 of a standard deviation.

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*Cohen, J. (1969). *Statistical Power Analysis for the Behavioral Sciences.* New York: Academic Press.

TABLE H-4
Comparability of Test Forms - Grade 4

AREA	Items/ Form	Form A Mean	Form A SD	Form A Rel	Form B Mean	Form B SD	Form B Rel	Form C Mean	Form C SD	Form C Rel
Reading Comprehension	16	9.84	3.31	.73	11.09	3.64	.81	10.83	3.01	.72
Writing Skills	16	10.02	3.16	.70	9.65	2.98	.66	10.67	3.04	.69
Mathematics	20	11.19	3.19	.68	10.76	3.49	.67	12.21	3.44	.69
Analytical Thinking	11	6.49	2.24	.57	6.42	2.44	.63	6.44	2.26	.55
Citizenship/Social Studies	7	3.79	1.54	.36	3.71	1.41	.30	3.79	1.57	.46
Arts & Humanities	10	6.35	2.08	.58	5.49	2.20	.57	5.62	2.15	.58
Science & Technology	10	4.98	1.89	.41	5.49	2.00	.46	4.33	1.92	.42
Environment	9	4.30	1.89	.48	3.68	1.69	.30	4.12	1.85	.45
Health Knowledge	11	6.67	2.08	.52	6.61	2.00	.50	6.41	2.11	.51
Self-Concept in School	11	21.05	4.51	.65	21.24	4.55	.68	20.63	4.66	.67
Health & Safety Practices	11	26.07	4.30	.61	26.47	4.94	.72	26.75	4.35	.68

Number of students responding to each form: Form A (N=9357) Form B (N=9287) Form C (N=9082)

TABLE H-6
Comparability of Test Forms - Grade 6

AREA	Items/ Form	Form A Mean	Form A SD	Form A Rel	Form B Mean	Form B SD	Form B Rel	Form C Mean	Form C SD	Form C Rel
Reading Comprehension	16	10.62	3.48	.76	10.84	3.59	.80	10.45	3.33	.74
Writing Skills	16	10.78	2.83	.62	10.42	3.14	.70	11.21	2.50	.57
Mathematics	20	14.14	3.25	.73	13.73	3.32	.72	14.01	3.36	.73
Analytical Thinking	11	7.52	2.34	.66	7.71	2.41	.68	7.39	2.27	.61
Citizenship/Social Studies	16	9.31	3.22	.70	9.62	2.99	.66	9.86	3.09	.68
Arts & Humanities	12	7.15	2.68	.66	7.41	2.44	.59	7.08	2.63	.66
Science & Technology	12	7.16	2.38	.57	7.35	2.23	.50	6.56	2.35	.54
Environment	9	5.33	2.08	.61	4.84	1.96	.50	5.22	1.94	.53
Health Knowledge	17	11.39	3.14	.69	11.11	3.04	.65	10.84	3.10	.67
Self-Concept in School	11	20.63	4.50	.70	20.73	4.36	.69	20.13	4.66	.71
Health & Safety Practices	12	27.37	4.34	.58	26.21	5.57	.74	26.64	5.43	.77

Number of students responding to each form: Form A (N=10084) Form B (N= 9995) Form C (N= 9751)

TABLE H-7
Comparability of Test Forms - Grade 7

AREA	Items/ Form	Form A Mean	Form A SD	Form A Rel	Form B Mean	Form B SD	Form B Rel	Form C Mean	Form C SD	Form C Rel	Form D Mean	Form D SD	Form D Rel
Reading Comprehension	12	6.94	2.87	.72	7.26	2.89	.73	7.47	2.86	.74	7.02	2.63	.67
Writing Skills	16	10.12	3.32	.74	10.31	3.06	.69	9.96	3.09	.68	9.27	2.92	.64
Mathematics	15	7.71	3.09	.69	7.31	3.25	.72	7.21	2.89	.69	7.44	2.96	.66
Analytical Thinking	8	4.45	1.72	.50	4.11	1.84	.53	4.36	1.88	.55	4.48	2.06	.62
Citizenship/Social Studies	15	7.75	2.94	.64	7.75	2.77	.60	8.05	3.18	.70	7.18	3.20	.71
Arts & Humanities	12	6.64	2.47	.58	6.71	2.62	.64	6.59	2.50	.60	6.78	2.77	.69
Science & Technology	10	4.53	2.01	.45	4.48	2.12	.53	4.82	2.11	.55	4.66	2.04	.50
Environment	10	4.76	1.98	.47	5.20	2.07	.50	4.61	2.03	.48	4.67	1.93	.46
Self-Concept in School	8	15.32	3.64	.61	15.24	3.90	.64	15.62	3.73	.61	14.67	4.06	.67
Health & Safety Practices	12	24.85	5.14	.65	23.68	4.86	.63	25.01	5.45	.76	25.11	5.46	.71

Number of students responding to each form: Form A (N=8427) Form B (N=8298) Form C (N=8198) Form D (N=7932)

TABLE H-9
Comparability of Test Forms - Grade 9

AREA	Items/ Form	Form A Mean	Form A SD	Form A Rel	Form B Mean	Form B SD	Form B Rel	Form C Mean	Form C SD	Form C Rel	Form D Mean	Form D SD	Form D Rel
Reading Comprehension	12	7.84	2.88	.75	8.17	2.89	.76	8.42	2.86	.76	7.80	2.71	.72
Writing Skills	16	11.47	3.16	.75	11.29	2.92	.69	10.99	2.97	.70	10.44	2.92	.67
Mathematics	15	9.22	3.05	.70	9.42	3.04	.72	8.78	2.96	.72	8.78	3.07	.69
Analytical Thinking	8	4.93	1.78	.56	4.58	1.95	.61	5.01	1.90	.60	5.01	2.11	.67
Citizenship/Social Studies	15	9.98	3.20	.74	9.95	3.21	.75	9.63	3.33	.76	9.36	3.63	.81
Arts & Humanities	12	7.51	2.48	.62	7.53	2.73	.70	7.57	2.71	.69	7.43	2.74	.70
Science & Technology	10	5.32	2.16	.53	5.38	2.29	.61	5.63	2.24	.61	5.37	2.21	.59
Environment	10	5.38	2.05	.51	5.76	2.14	.55	5.42	2.17	.55	5.40	2.07	.53
Self-Concept in School	8	15.19	3.49	.63	15.07	3.73	.66	15.53	3.58	.64	14.60	3.82	.67
Health & Safety Practices	12	23.40	5.18	.67	21.73	4.44	.54	23.15	5.28	.74	22.86	5.26	.68

Note: Number of students responding to each form: Form A (N=10008) Form B (N=9947) Form C (N=9807) Form D (N=9582)

TABLE H-11
Comparability of Test Forms - Grade 11

AREA	Items/ Form	Form A Mean	Form A SD	Form A Rel	Form B Mean	Form B SD	Form B Rel	Form C Mean	Form C SD	Form C Rel	Form D Mean	Form D SD	Form D Rel
Reading Comprehension	12	7.68	2.59	.72	7.73	2.76	.73	7.11	2.87	.73	7.47	2.95	.75
Writing Skills	16	9.26	2.87	.65	9.90	2.97	.69	9.88	2.82	.66	9.79	2.93	.70
Mathematics	15	8.79	2.84	.66	8.94	3.38	.76	9.20	3.14	.73	8.76	3.14	.71
Analytical Thinking	8	4.56	1.96	.61	4.51	1.86	.56	4.78	2.11	.67	4.45	1.99	.63
Citizenship/Social Studies	15	9.07	3.28	.75	8.62	3.41	.76	8.49	3.34	.74	9.00	3.21	.72
Arts & Humanities	12	6.81	2.67	.67	6.75	2.52	.67	6.61	2.53	.61	6.81	2.54	.65
Science & Technology	10	5.58	2.42	.63	5.43	2.48	.63	5.43	2.33	.58	5.46	2.12	.48
Environment	10	5.60	2.21	.59	5.59	2.00	.49	5.22	1.97	.46	5.70	2.29	.60
Self-Concept in School	8	15.64	3.73	.70	15.02	3.73	.69	15.05	3.45	.63	15.26	3.33	.60
Health & Safety Practices	12	25.20	5.85	.74	25.99	5.54	.64	26.46	6.24	.72	25.97	5.69	.71

Note: Number of students responding to each form: Form A (N=9923) Form B (N=9861) Form C (N=9598) Form D (N=9374)

RELIABILITY

Internal Consistency

Each school has a set of reliability coefficients calculated uniquely for the students in that building. These reliability estimates are provided in the school report. (See the EQA Commentary, page 12, for the rationale for presenting these data.) This information enables school administrators to make judgments about how reliably their group of students responded to each area. To provide administrators with comparative reliability data, the distribution of internal consistency estimates for schools comprising the state normative sample was examined and median values obtained. The median internal consistency estimate for each area assessed is presented in TABLE J. These values seem quite satisfactory. Of the 52 reliabilities, 8 are in the .90's, 34 are in the .80's the .80's, 8 are in the .70's and only 2 are in the .60's.

Stability of School Means

An approach to reliability which took into account the school as the unit of analysis rather than the student was the stability of group (school) means. This was done by first dividing the student data within each school into random halves and producing, through matrix sampling formulas, a mean score for each half. Correlation coefficients between the two mean scores were then calculated. These correlations are shown in TABLE K. Coefficients of this type are typically lower than internal consistency estimates. Still, the magnitude of the stability coefficients indicate acceptable reliability. The cognitive areas demonstrated the strongest showing with 11 correlations in the .80's, 16 in the .70's, 9 in the .60's and 6 in the .50's. The noncognitive areas, particularly at Grade four, revealed weaker correlations with 4 in the .50 to .69 range and 6 in the .30 to .49 range.

Standard Error of the Mean

Since matrix sampling methodology is used in estimation of school means, an appropriate statistical technique is used to develop a standard error of the mean. The magnitude of the standard error of the mean for a particular matrix sampling design will decrease as the number of students increases. Thus, a larger standard error of the mean will occur for smaller schools. Adding and subtracting the standard error of the mean will produce a range within which the true score of a school could be expected to fall with a probability of .68. TABLE L presents the median values for the standard error of the mean achieved by schools in the 1986 assessment.

Percentage of Omits

Although the amount of omitted items rarely occurs in discussions of reliability, it is included here because of the concern expressed by some school administrators as to whether students were responding to most of the items and how this influenced a school's score. The EQA school report contains information regarding the percentage of items omitted for each area. In TABLE M are the median values calculated for those schools participating in the 1986 assessment. As shown, the percentage of omits is less than eight tenths of one percent for all of the indices. Overall, the percentage of items omitted is extremely small and has little impact on the reliability of scores.

TABLE J

Median Internal Consistency Reliability Estimates
Derived from Schools
Involved in the 1986 Assessment

Area	Grade 4 (N=384)	Grade 6 (N=349)	Grade 7 (N=156)	Grade 9 (N=144)	Grade 11 (N=121)
Cognitive					
Reading Comprehension	.89	.90	.90	.91	.91
Writing Skills	.85	.86	.89	.89	.89
Mathematics	.84	.86	.89	.89	.90
Analytical Thinking	.79	.83	.82	.85	.86
Citizenship/Social Studies	.67	.85	.88	.92	.91
Arts and Humanities	.79	.82	.86	.88	.87
Science and Technology	.70	.75	.79	.83	.83
Environment	.68	.76	.76	.81	.81
Health Knowledge	.74	.83	NA	NA	NA
Noncognitive					
Self-Concept in School	.85	.87	.87	.88	.88
Health and Safety Practices	.85	.87	.89	.88	.90

TABLE K

Stability* of School Means
Derived from Schools
Involved in the 1986 Assessment

Area	Grade 4 (N=384)	Grade 6 (N=349)	Grade 7 (N=156)	Grade 9 (N=144)	Grade 11 (N=121)
Cognitive					
Reading Comprehension	.59	.66	.73	.84	.78
Writing Skills	.65	.72	.79	.78	.74
Mathematics	.70	.72	.84	.82	.82
Analytical Thinking	.56	.59	.70	.77	.71
Citizenship/Social Studies	.62	.66	.68	.81	.80
Arts and Humanities	.69	.74	.81	.84	.83
Science and Technology	.55	.60	.66	.82	.72
Environment	.59	.65	.73	.81	.72
Health Knowledge	.56	.71	NA	NA	NA
Noncognitive					
Self-Concept in School	.32	.51	.51	.58	.42
Health and Safety Practices	.37	.45	.63	.66	.63

*Correlation coefficients between the means of random halves

TABLE L

Median Values for the Standard Error of the Mean
Derived from Schools
Involved in the 1986 Assessment

Area	Grade 4 (N=384)	Grade 6 (N=349)	Grade 7 (N=156)	Grade 9 (N=144)	Grade 11 (N=121)
Cognitive					
Reading Comprehension	.33	.34	.37	.35	.36
Writing Skills	.35	.35	.37	.35	.37
Mathematics	.34	.31	.37	.37	.37
Analytical Thinking	.37	.34	.38	.37	.37
Citizenship/Social Studies	.36	.36	.39	.36	.37
Arts and Humanities	.35	.36	.39	.38	.38
Science and Technology	.37	.37	.40	.39	.39
Environment	.37	.36	.39	.39	.39
Health Knowledge	.35	.35	NA	NA	NA
Noncognitive					
Self-Concept in School	.64	.60	.70	.65	.63
Health and Safety Practices	.63	.64	.72	.72	.72

TABLE M

Median Values for Percentage of Omits
Derived from Schools
Involved in the 1986 Assessment

Area	Grade 4 (N=384)	Grade 6 (N=349)	Grade 7 (N=156)	Grade 9 (N=144)	Grade 11 (N=121)
Cognitive					
Reading Comprehension	0.0%	0.0%	0.2%	0.1%	0.2%
Writing Skills	0.2%	0.1%	0.2%	0.1%	0.1%
Mathematics	0.8%	0.2%	0.6%	0.3%	0.4%
Analytical Thinking	0.0%	0.0%	0.2%	0.1%	0.1%
Citizenship/Social Studies	0.2%	0.2%	0.3%	0.1%	0.1%
Arts and Humanities	0.2%	0.3%	0.5%	0.3%	0.4%
Science and Technology	0.1%	0.1%	0.2%	0.1%	0.3%
Environment	0.3%	0.2%	0.2%	0.1%	0.2%
Health Knowledge	0.1%	0.1%	NA	NA	NA
Noncognitive					
Self-Concept in School	0.4%	0.4%	0.3%	0.2%	0.1%
Health and Safety Practices	0.2%	0.1%	0.3%	0.2%	0.1%

APPENDIX

REGRESSION ANALYSIS FOR 1986

GRADE 4

Area	Step	Variable	R-Square	Final Equation: Regression Coefficient	Final Equation: Standardized Regression Coefficient	Final Equation: Intercept/ Std. Error
Reading Comprehension	1	PCTLI	0.22	-0.017	-0.099	
	2	PAREDUC	0.28	1.987	0.305	
	3	PCTWHITE	0.35	0.058	0.256	
	4	TPARCONF	0.37	0.552	0.172	18.9722/
	5	HOMEREAD	0.38	0.734	0.117	2.1864
Writing Skills	1	PAREDUC	0.32	3.257	0.493	
	2	PCTWHITE	0.42	0.058	0.251	19.5928/
	3	PCTLI	0.44	-0.033	-0.191	2.0965
Mathematics	1	PAREDUC	0.21	3.285	0.391	
	2	PCTWHITE	0.27	0.076	0.256	
	3	PCTLI	0.30	-0.047	-0.215	
	4	RESIDESQ	0.31	0.317	0.689	22.5390/
	5	RESIDE	0.33	-1.284	-0.578	2.9319
Analytical Thinking	1	PAREDUC	0.26	1.804	0.423	
	2	PCTWHITE	0.37	0.039	0.257	
	3	TPARCONF	0.40	0.372	0.177	9.4927/
	4	HOMEREAD	0.41	0.514	0.125	1.3919
Citizenship/ Social Studies	1	HOMEREAD	0.10	0.488	0.159	
	2	TPARCONF	0.14	0.260	0.166	
	3	PCTWHITE	0.16	0.019	0.166	6.1376/
	4	PAREDUC	0.18	0.540	0.170	1.2222
Arts and Humanities	1	PAREDUC	0.31	1.596	0.325	
	2	PCTLI	0.41	-0.014	-0.112	
	3	PCTWHITE	0.45	0.039	0.224	
	4	TPARCONF	0.47	0.409	0.169	
	5	HOMEREAD	0.48	0.751	0.158	6.1254/
	6	TUITION	0.50	0.001	0.145	1.4860
Science and Technology	1	PAREDUC	0.17	1.485	0.376	
	2	PCTWHITE	0.32	0.049	0.352	7.8000/
	3	PCTLI	0.33	-0.012	-0.121	1.3751
Environment	1	PCTLI	0.16	-0.018	-0.189	
	2	PCTWHITE	0.21	0.033	0.263	
	3	PAREDUC	0.28	1.326	0.370	7.9190/
	4	TUITION	0.29	-0.000	-0.127	1.2849
Health Knowledge	1	PCTWHITE	0.21	0.057	0.418	
	2	PAREDUC	0.35	1.098	0.282	
	3	TPARCONF	0.37	0.258	0.135	9.9169/
	4	HOMEREAD	0.38	0.495	0.132	1.2976

(GRADE 4 - Continued)

Self-Concept in School	1	SPARINT	0.24	3.917	0.403	41.0594/
	2	PAREDUC	0.29	1.778	0.245	2.5891
Health and Safety Practices	1	SPARINT	0.19	4.213	0.388	
	2	TVWATCH	0.22	-1.590	-0.190	61.0756/
	3	PCTGIRLS	0.23	0.042	0.104	3.0087

GRADE 6

				Final Equation		
Area	Step	Variable	R-Square	Regression Coefficient	Standardized Regression Coefficient	Intercept/ Std. Error
Reading Comprehension	1	HOMEREAD	0.29	1.678	0.247	
	2	PCTWHITE	0.41	0.079	0.352	
	3	PAREDUC	0.44	1.610	0.217	
	4	GRENROLL	0.46	-0.008	-0.144	19.5332/
	5	TVWATCH	0.48	-1.083	-0.136	2.2254
Writing Skills	1	PCTLI	0.35	-0.057	-0.270	
	2	HOMEREAD	0.42	0.792	0.108	
	3	MOBILITY	0.46	-3.306	-0.178	
	4	PAREDUC	0.50	2.216	0.276	
	5	TVWATCH	0.53	-1.319	-0.153	36.6334/
	6	PCTWHITE	0.54	0.034	0.142	2.2470
Mathematics	1	HOMEREAD	0.22	1.656	0.224	
	2	PCTLI	0.27	-0.056	-0.262	
	3	MOBILITY	0.31	-3.420	-0.183	
	4	TVWATCH	0.33	-1.525	-0.176	43.2638/
	5	GRENROLL	0.35	-0.007	-0.113	2.7091
Analytical Thinking	1	HOMEREAD	0.24	0.712	0.169	
	2	PCTWHITE	0.30	0.032	0.231	
	3	PAREDUC	0.35	0.967	0.210	
	4	TVWATCH	0.37	-0.691	-0.140	
	5	GRENROLL	0.39	-0.005	-0.146	18.1299/
	6	PCTLI	0.40	-0.017	-0.141	1.4749
Citizenship/ Social Studies	1	HOMEREAD	0.27	0.819	0.137	
	2	PCTWHITE	0.37	0.049	0.249	
	3	PAREDUC	0.43	2.203	0.336	
	4	TVWATCH	0.44	-1.037	-0.148	
	5	TUITION	0.46	-0.001	-0.211	
	6	GRENROLL	0.47	-0.006	-0.115	23.7443/
	7	PCTLI	0.48	-0.025	-0.145	1.9602

(GRADE 6 - Continued)

Arts and Humanities	1	PCTLI	0.41	-0.044	-0.263	
	2	PAREDUC	0.50	2.103	0.328	
	3	PCTWHITE	0.58	0.046	0.238	
	4	TVWATCH	0.59	-0.854	-0.125	14.1082/
	5	HOMEREAD	0.60	0.804	0.137	1.6664
Science and Technology	1	PCTWHITE	0.28	0.044	0.309	
	2	PAREDUC	0.43	1.915	0.401	
	3	RESIDE	0.46	-0.191	-0.163	
	4	TVWATCH	0.48	-0.878	-0.172	
	5	MOBILITY	0.49	-1.538	-0.139	17.8250/
	6	PCTGIRLS	0.50	-0.028	-0.103	1.3918
Environment	1	PCTWHITE	0.28	0.036	0.278	
	2	PAREDUC	0.39	1.203	0.279	
	3	RESIDE	0.44	-0.253	-0.240	
	4	TVWATCH	0.47	-0.815	-0.177	10.3896/
	5	HOMEREAD	0.48	0.579	0.147	1.2867
Health Knowledge	1	PCTWHITE	0.36	0.084	0.385	
	2	HOMEREAD	0.45	1.214	0.183	
	3	TVWATCH	0.46	-0.872	-0.112	
	4	PAREDUC	0.47	1.396	0.192	21.5070/
	5	RESIDESQ	0.49	-0.061	-0.168	2.1417
Self-Concept in School	1	SPARINT	0.36	4.991	0.568	
	2	GRENROLL	0.39	-0.009	-0.156	37.0110/
	3	HOMEREAD	0.40	0.942	0.129	2.5527
Health and Safety Practices	1	SPARINT	0.18	4.161	0.449	
	2	PCTGIRLS	0.20	0.057	0.120	
	3	GRENROLL	0.21	-0.009	-0.146	
	4	PAREDUC	0.23	-1.191	-0.141	
	5	TVWATCH	0.23	-1.282	-0.142	68.1906/
	6	PCTWHITE	0.25	-0.034	-0.133	3.0265

GRADE 7

				Final Equation		
Area	Step	Variable	R-Square	Regression Coefficient	Standardized Regression Coefficient	Intercept/ Std. Error
Reading Comprehension	1	HOMEREAD	0.44	2.503	0.330	
	2	PCTWHITE	0.56	0.061	0.298	
	3	PAREDUC	0.59	2.044	0.254	
	4	TVWATCH	0.61	-1.789	-0.178	16.0494/
	5	MOBILITY	0.63	-2.870	-0.152	1.6591

(GRADE 7 - Continued)

Writing Skills	1	PCTLI	0.45	-0.052	-0.252	
	2	HOMEREAD	0.56	1.926	0.224	
	3	PCTWHITE	0.59	0.060	0.259	
	4	PAREDUC	0.63	2.325	0.255	
	5	PCTGIRLS	0.64	0.088	0.125	23.9885/
	6	TVWATCH	0.66	-1.536	-0.134	1.8057
Mathematics	1	HOMEREAD	0.40	1.562	0.175	
	2	PCTLI	0.47	-0.031	-0.145	
	3	PCTWHITE	0.51	0.053	0.219	
	4	PAREDUC	0.57	3.913	0.413	
	5	TVWATCH	0.59	-2.122	-0.179	20.6597/
	6	TUITION	0.60	-0.001	-0.155	2.0288
Analytical Thinking	1	HOMEREAD	0.36	1.342	0.297	
	2	PCTWHITE	0.44	0.045	0.365	
	3	PAREDUC	0.49	1.359	0.283	4.3087/
	4	CLSIZE	0.51	0.082	0.122	1.1327
Citizenship/ Social Studies	1	HOMEREAD	0.39	2.772	0.337	
	2	PCTWHITE	0.48	0.066	0.298	
	3	PAREDUC	0.53	2.629	0.300	11.6258/
	4	MOBILITY	0.54	-3.455	-0.168	1.9843
Arts and Humanities	1	PCTLI	0.45	-0.049	-0.269	
	2	HOMEREAD	0.54	1.399	0.186	
	3	TVWATCH	0.58	-2.318	-0.231	
	4	PAREDUC	0.61	2.567	0.321	25.5777/
	5	MOBILITY	0.65	-4.196	-0.223	1.5850
Science and Technology	1	HOMEREAD	0.42	1.964	0.394	
	2	PCTWHITE	0.55	0.058	0.430	4.5817/
	3	PAREDUC	0.57	1.015	0.192	1.1559
Environment	1	HOMEREAD	0.31	1.326	0.258	
	2	PCTWHITE	0.45	0.038	0.275	
	3	MOBILITY	0.46	-2.725	-0.212	
	4	PAREDUC	0.48	1.007	0.184	
	5	CLSIZE	0.50	0.113	0.147	10.0652/
	6	TVWATCH	0.52	-0.995	-0.145	1.2857
Self-Concept in School	1	SPARINT	0.31	5.308	0.629	
	2	PCTWHITE	0.34	-0.040	-0.199	42.2784/
	3	GRENROLL	0.36	-0.004	-0.129	2.1087
Health and Safety Practices	1	SPARINT	0.13	6.924	0.567	
	2	PAREDUC	0.18	-3.521	-0.310	79.2141/
	3	PCTWHITE	0.21	-0.044	-0.154	3.3874

GRADE 9

Area	Step	Variable	R-Square	Final Equation: Regression Coefficient	Final Equation: Standardized Regression Coefficient	Final Equation: Intercept/ Std. Error
Reading Comprehension	1	PCTWHITE	0.31	0.053	0.220	
	2	PAREDUC	0.38	2.560	0.284	
	3	MOBILITY	0.45	-9.598	-0.388	31.5465/
	4	TVWATCH	0.50	-3.015	-0.260	2.0231
Writing Skills	1	HOMEREAD	0.27	0.615	0.077	
	2	MOBILITY	0.40	-11.977	-0.494	
	3	PAREDUC	0.51	3.598	0.406	46.1162/
	4	TVWATCH	0.59	-3.537	-0.311	1.8011
Mathematics	1	HOMEREAD	0.37	1.393	0.147	
	2	PCTWHITE	0.47	0.065	0.234	
	3	PAREDUC	0.54	2.938	0.280	
	4	PCTLI	0.56	-0.046	-0.192	
	5	MOBILITY	0.60	-7.521	-0.262	28.1634/
	6	TVWATCH	0.62	-2.475	-0.184	2.0721
Analytical Thinking	1	PCTWHITE	0.30	0.030	0.197	
	2	PAREDUC	0.37	1.861	0.326	
	3	MOBILITY	0.49	-6.789	-0.434	
	4	TVWATCH	0.53	-1.747	-0.238	15.9908/
	5	PCTGIRLS	0.56	0.057	0.170	1.2107
Citizenship/ Social Studies	1	PCTWHITE	0.31	0.075	0.243	
	2	PAREDUC	0.40	3.786	0.325	
	3	MOBILITY	0.48	-12.934	-0.406	34.2453/
	4	TVWATCH	0.51	-2.766	-0.185	2.5913
Arts and Humanities	1	HOMEREAD	0.38	1.603	0.206	
	2	PAREDUC	0.47	2.520	0.292	
	3	PCTWHITE	0.58	0.072	0.314	
	4	PCTLI	0.61	-0.058	-0.296	
	5	PCTGIRLS	0.64	0.081	0.159	
	6	MOBILITY	0.66	-5.129	-0.217	11.4376/
	7	RESIDE	0.67	0.316	0.159	1.5966
Science and Technology	1	PCTWHITE	0.36	0.039	0.207	
	2	HOMEREAD	0.49	1.169	0.183	
	3	MOBILITY	0.54	-7.484	-0.387	
	4	PCTLI	0.58	-0.027	-0.169	
	5	TVWATCH	0.61	-1.906	-0.210	18.9926/
	6	PAREDUC	0.62	0.962	0.136	1.3916
Environment	1	HOMEREAD	0.36	2.031	0.356	
	2	PCTWHITE	0.47	0.031	0.185	
	3	PCTLI	0.51	-0.047	-0.328	
	4	MOBILITY	0.56	-3.945	-0.228	16.1868/
	5	TUITION	0.57	-0.001	-0.167	1.3129

(GRADE 9 - Continued)

Self-Concept in School	1	SPARINT	0.22	3.429	0.490	43.3945/
	2	PCTGIRLS	0.24	0.058	0.148	1.8269
Health and Safety Practices	1	MOBILITY	0.10	-9.061	-0.276	
	2	HOMEREAD	0.17	-2.212	-0.205	
	3	SPARINT	0.22	4.190	0.333	
	4	PCTGIRLS	0.26	0.137	0.195	82.4479/
	5	PAREDUC	0.29	-2.772	-0.231	3.2094

GRADE 11

				Final Equation		
Area	Step	Variable	R-Square	Regression Coefficient	Standardized Regression Coefficient	Intercept/ Std. Error
Reading Comprehension	1	TVWATCH	0.30	-3.883	-0.388	
	2	MOBILITY	0.39	-11.631	-0.378	
	3	PAREDUC	0.44	2.472	0.355	
	4	PCTGIRLS	0.47	0.100	0.175	29.7453/
	5	RESIDE	0.50	-0.340	-0.183	1.8354
Writing Skills	1	TVWATCH	0.31	-2.703	-0.294	
	2	PCTACAD	0.41	0.033	0.171	
	3	PCTWHITE	0.52	0.039	0.205	
	4	MOBILITY	0.55	-8.115	-0.287	
	5	PAREDUC	0.59	2.607	0.407	
	6	GRENROLL	0.61	-0.004	-0.147	32.4681/
	7	PCTGIRLS	0.62	0.061	0.116	1.4762
Mathematics	1	TVWATCH	0.40	-3.667	-0.321	
	2	PCTWHITE	0.47	0.048	0.200	
	3	PCTLI	0.53	-0.047	-0.233	
	4	MOBILITY	0.56	-9.253	-0.264	36.3990/
	5	PAREDUC	0.59	1.952	0.245	1.8884
Analytical Thinking	1	TVWATCH	0.34	-2.479	-0.375	
	2	PCTWHITE	0.40	0.030	0.218	
	3	PAREDUC	0.44	1.359	0.294	
	4	PCTGIRLS	0.47	0.065	0.173	14.4145/
	5	MOBILITY	0.49	-3.413	-0.168	1.2306
Citizenship/ Social Studies	1	TVWATCH	0.29	-4.427	-0.385	
	2	MOBILITY	0.35	-13.786	-0.389	39.1228/
	3	PAREDUC	0.47	3.216	0.401	2.1632
Arts and Humanities	1	PCTLI	0.40	-0.047	-0.273	
	2	PAREDUC	0.51	3.102	0.448	
	3	TVWATCH	0.58	-2.696	-0.271	27.7576/
	4	MOBILITY	0.61	-6.456	-0.211	1.5972

Science and Technology	1	TVWATCH	0.40	-3.075	-0.381	
	2	PCTWHITE	0.53	0.053	0.314	
	3	HOMEREAD	0.56	0.556	0.095	
	4	MOBILITY	0.57	-4.281	-0.173	
	5	CLSIZE	0.58	-0.111	-0.108	
	6	PAREDUC	0.59	1.324	0.236	23.3202/
	7	TEDUC	0.61	-1.242	-0.142	1.3219
Environment	1	TVWATCH	0.35	-1.694	-0.233	
	2	PCTWHITE	0.46	0.034	0.222	
	3	HOMEREAD	0.50	1.249	0.237	
	4	PCTLI	0.53	-0.030	-0.238	18.9962/
	5	MOBILITY	0.56	-4.582	-0.205	1.2542
Self-Concept in School	1	SPARINT	0.24	3.728	0.496	
	2	PCTWHITE	0.29	-0.052	-0.288	52.8558/
	3	TVWATCH	0.31	-1.260	-0.147	1.8299
Health and Safety Practices	1	PCTLI	0.13	0.118	0.412	
	2	TVWATCH	0.24	-8.738	-0.537	
	3	SPARINT	0.31	4.581	0.321	
	4	PAREDUC	0.38	-3.528	-0.311	
	5	PCTWHITE	0.45	-0.108	-0.318	
	6	PCTGIRLS	0.48	0.171	0.184	110.4401/
	7	TEDUC	0.50	-2.929	-0.166	3.0193